DECEMBER 1955

BUTANE-PROPANE News

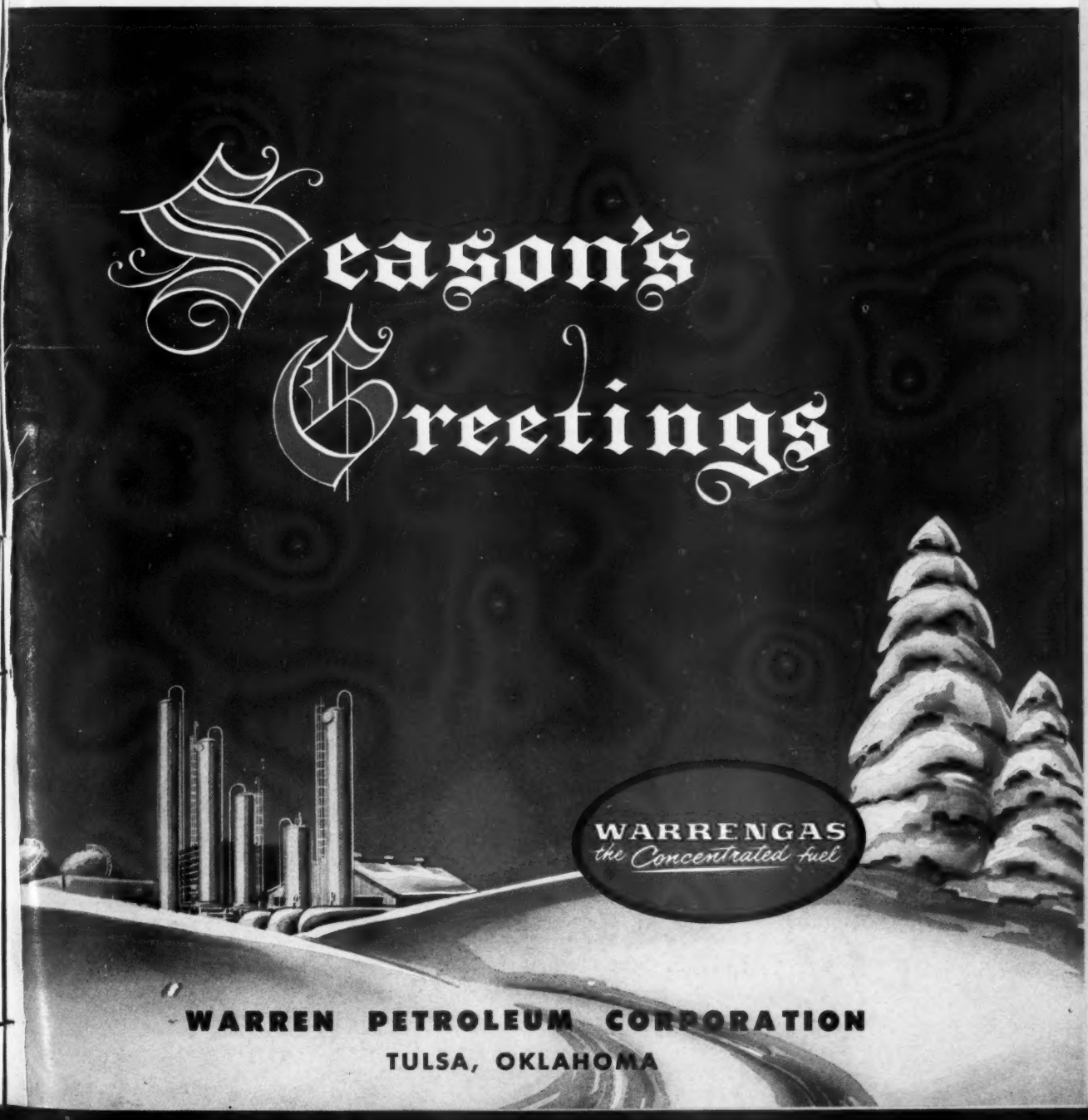
Headquarters for L.P. gas Information Since 1931

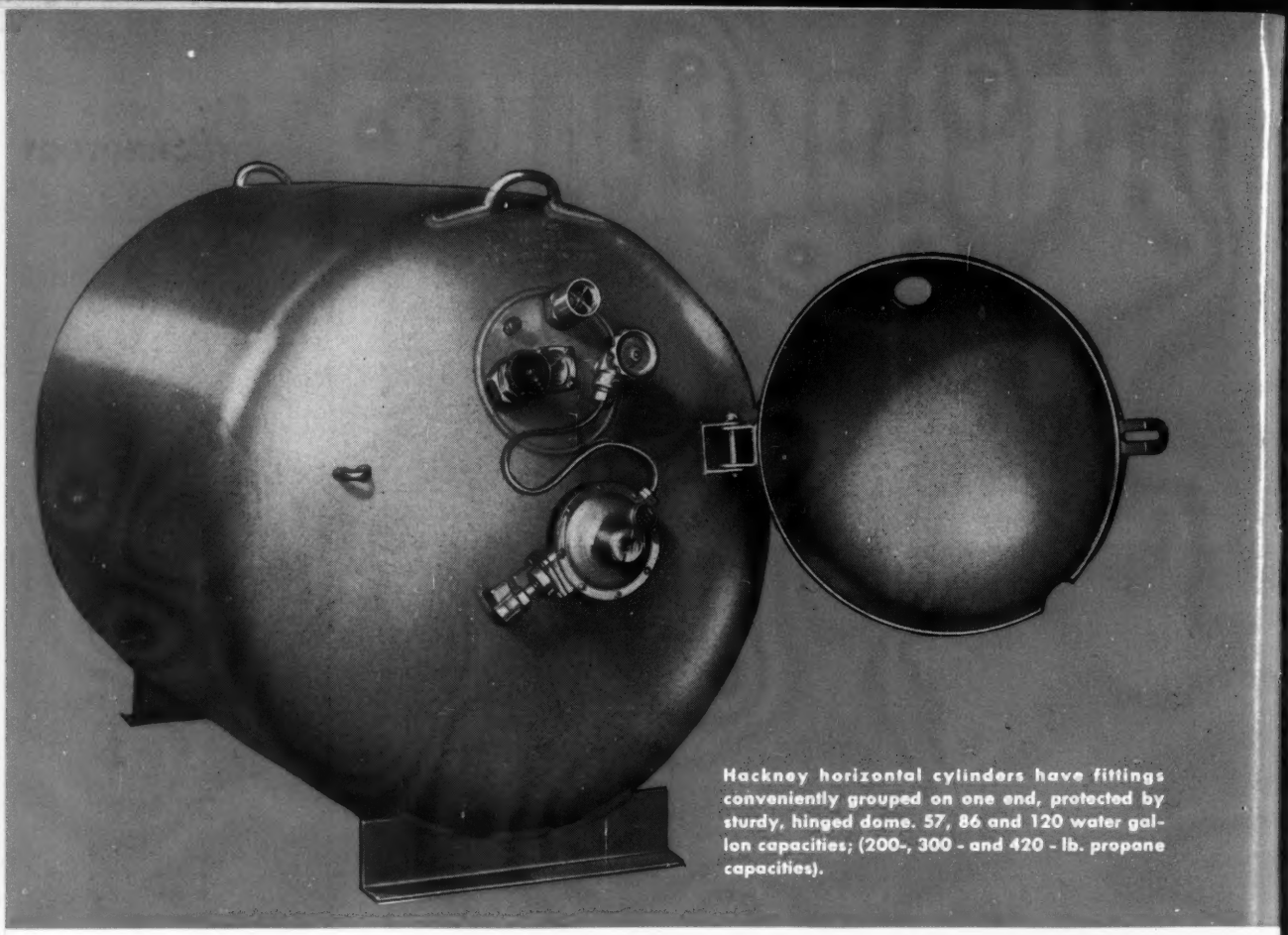
STACK TECHNOLOGY

How LPG Helped Bring That Christmas Turkey to Market

FIFTY CENTS PER COPY

BRIDGEPORT, CONN. DAVENPORT, IOWA HOUSTON, TEXAS LOS ANGELES, CALIF. SAN FRANCISCO, CALIF.





Hackney horizontal cylinders have fittings conveniently grouped on one end, protected by sturdy, hinged dome. 57, 86 and 120 water gallon capacities; (200-, 300 - and 420 - lb. propane capacities).

Horizontal or Vertical Hackney "big fellows" are big in value

These big Hackney cylinders are *strong.* They are cold drawn from two sheets of high-strength steel—and the two deep drawn shells are joined by a single circumferential weld. Weld is X-ray controlled to assure soundness and durability. Hackney cylinders are scientifically heat treated after all forming and welding to assure correct physical properties of both steel and weld.

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Send for specifications and literature on Hackney vertical or horizontal cylinders to meet the needs of your big-load customers.

Permanent collar or removable hood on Hackney big vertical cylinders can be embossed with your company name. Available in 150-, 200-, 300-, or 420-lb. capacities.

Hackney

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Pressed Steel Tank Company

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Prove LP-Gas Economy

When *Household Magazine* wanted to know to the penny how much LP-Gas service actually costs, they metered it! The results of this research were printed in a recent issue.

When you want to know, to the penny, how much LP-Gas you sell, (and you should) you need only meter your services. Then you will reduce errors to a minimum. And you'll earn your customers' goodwill by providing invoices they can check against meter readings.

With meters you'll save money, too, through more efficient truck routing, greater storage capacity and simplified inventory control.

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Household Magazine's research staff installed Rockwell LP-Gas meters on every appliance in a typical home. Accurate meter records of consumption proved operating economies.

Photo Courtesy Household Magazine and LP-GAS Information Service

Cost figures in *Household's* story show the advantage of a sliding rate scale—the more LP-Gas used the less it costs per unit. Only metered service makes such a business building rate structure practical.

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BUTANE-PROPANE News

VOLUME 17 • NUMBER 12

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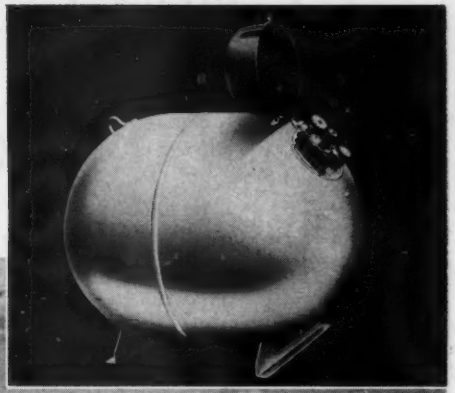
FROM PIGS TO . . .



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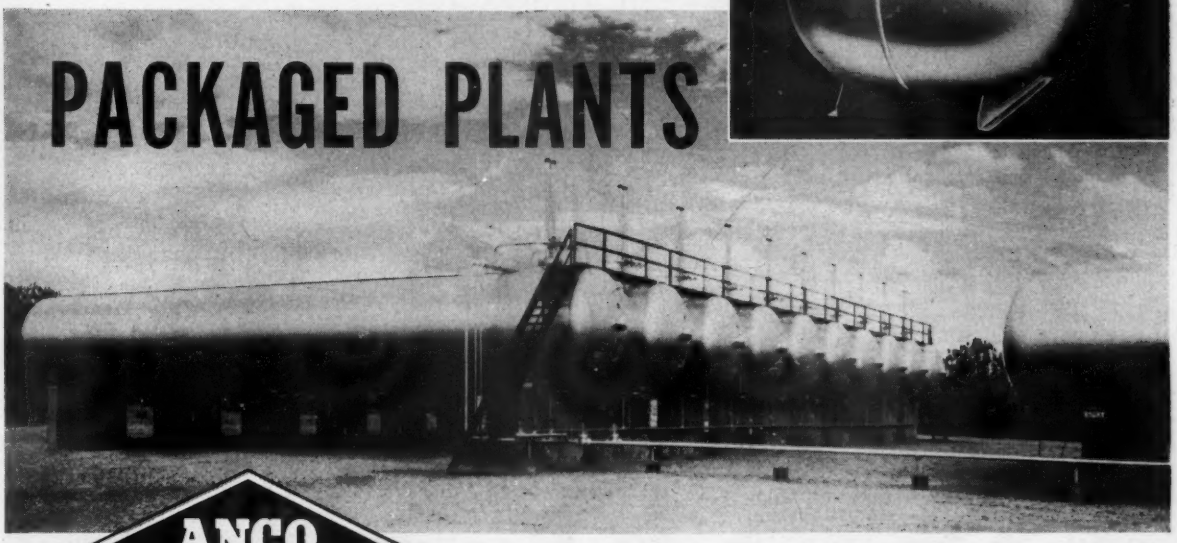

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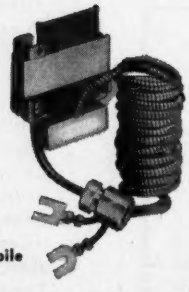
For all gases. Improved terminals simplify installation and service, assure tight connections.

Conduit cover available. Tight shut-off (can be mounted horizontal or vertical).

A valve size for every appliance. Pictured, above, the ⅜" or ½" small model. Available in sizes up through 1".



C582 Powerpile Pilot

A universal pilot for all street gases. For L.P. gases only the orifice changes.

Blue flame pilot uses no primary air. Provides 40% more power with half as much gas.

One pilot burner tip simplifies stocking. Eliminates plugged ignition ports or carry around slots. Provides positive ignition.

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Newest-style thermostat

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self-powered Powerpile* package

Reduces servicing! Simplifies installation! Minimizes stocking and handling!

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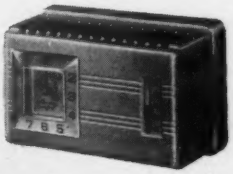
Wide range of thermostats. A wide range of thermostats can be used with these systems. You can satisfy any customer's request.

Unexcelled thermostat performance. The various thermostats give performance comparable to that of any 24-volt system.

These thermostats also available in Powerpile Package

Y400A TS827 Thermostat has a mercury switch, and extra convenience features to provide for economical control of the heating system.

Y400C TM801 Time-O-Stat works like an alarm clock—set it at night and it automatically turns up the heat each morning.



Y400D TM850 Chronotherm has the famous electric clock that automatically turns the heat down at night . . . and raises it again in the morning when you rise.

For complete information on the new Honeywell Powerpile Packages, and on the complete line of Honeywell Controls, call your local Honeywell office or write Honeywell, Dept. BN-12-123, Minneapolis 8, Minnesota.

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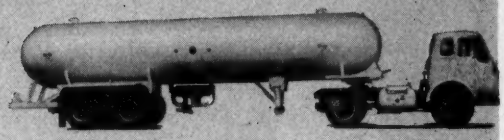

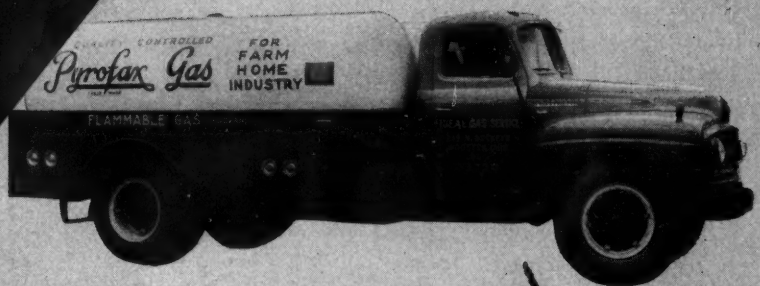

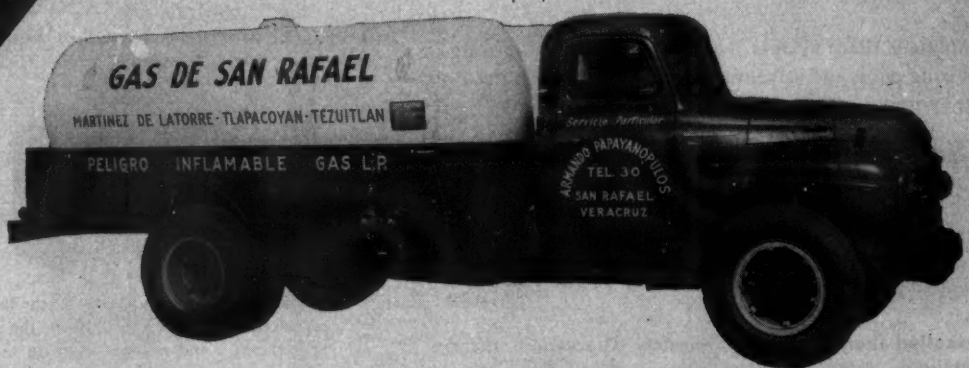

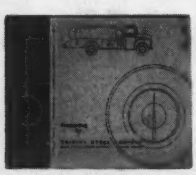

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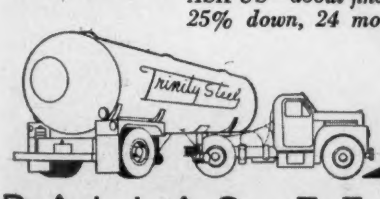

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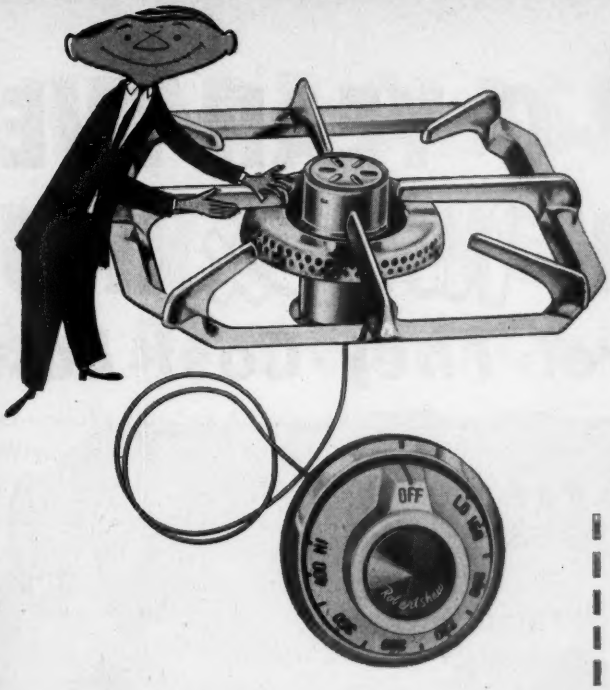

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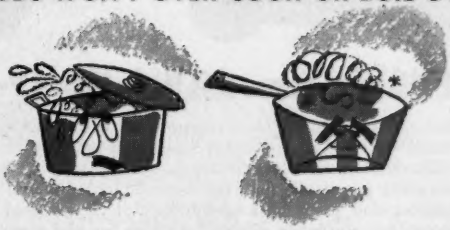
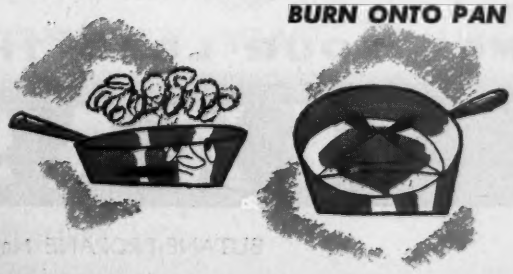


FOODS WON'T SMOKE, SCORCH, BURN ONTO PAN



LOOK AT THERMAL EYE® THROUGH YOUR CUSTOMERS' EYES

With controlled top-burner heat, food cooks at even, uniform temperature for best flavor and texture. Foods won't boil-over or over-cook. Cooking is easier, more convenient, worry-free. It's a big time-saver. Homemaker can tend to other household tasks, or just "relax", while food cooks automatically.

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A PLAN TO MEET EVERY NEED

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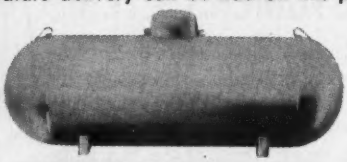

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Domestic Tanks

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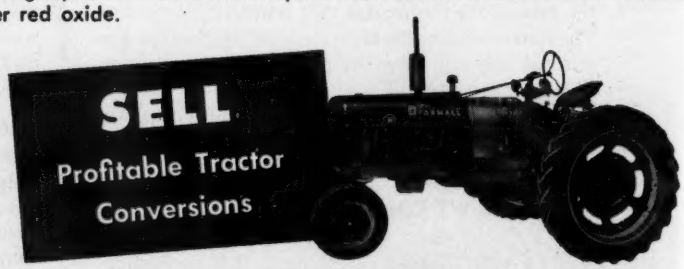

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PREPARE NOW to Serve this Rich, New LP-G Market!

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NORTH TEXAS

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FLOW PIPING "Perfectly Balanced" UNITS!

They Do the Job Quicker and Easier!

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EXTRA SAVINGS **on Complete Nor-Tex Pipe-It-Yourself "Package Units"—Nothing More to Buy!**

Nor-Tex
STANDARD TWIN

HIGH FLOW PIPING

Every Unit Priced Completely Equipped and Ready to Go . . . Excise Tax Paid.

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A PLAN TO MEET EVERY NEED!

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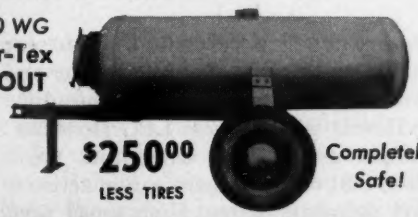
FARM CART *Spots Your Fuel Where You Need It*

The Nor-Tex Scout is easy to "spot" with car, truck or tractor. Complete with recessed relief valve. 12½' delivery hose, ¾" OIC valve and hose coupling. Mounted on a heavy duty axle with standard Chevrolet hub and 15" wheels.

300 WG Nor-Tex SCOUT



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CENTRAL 5416

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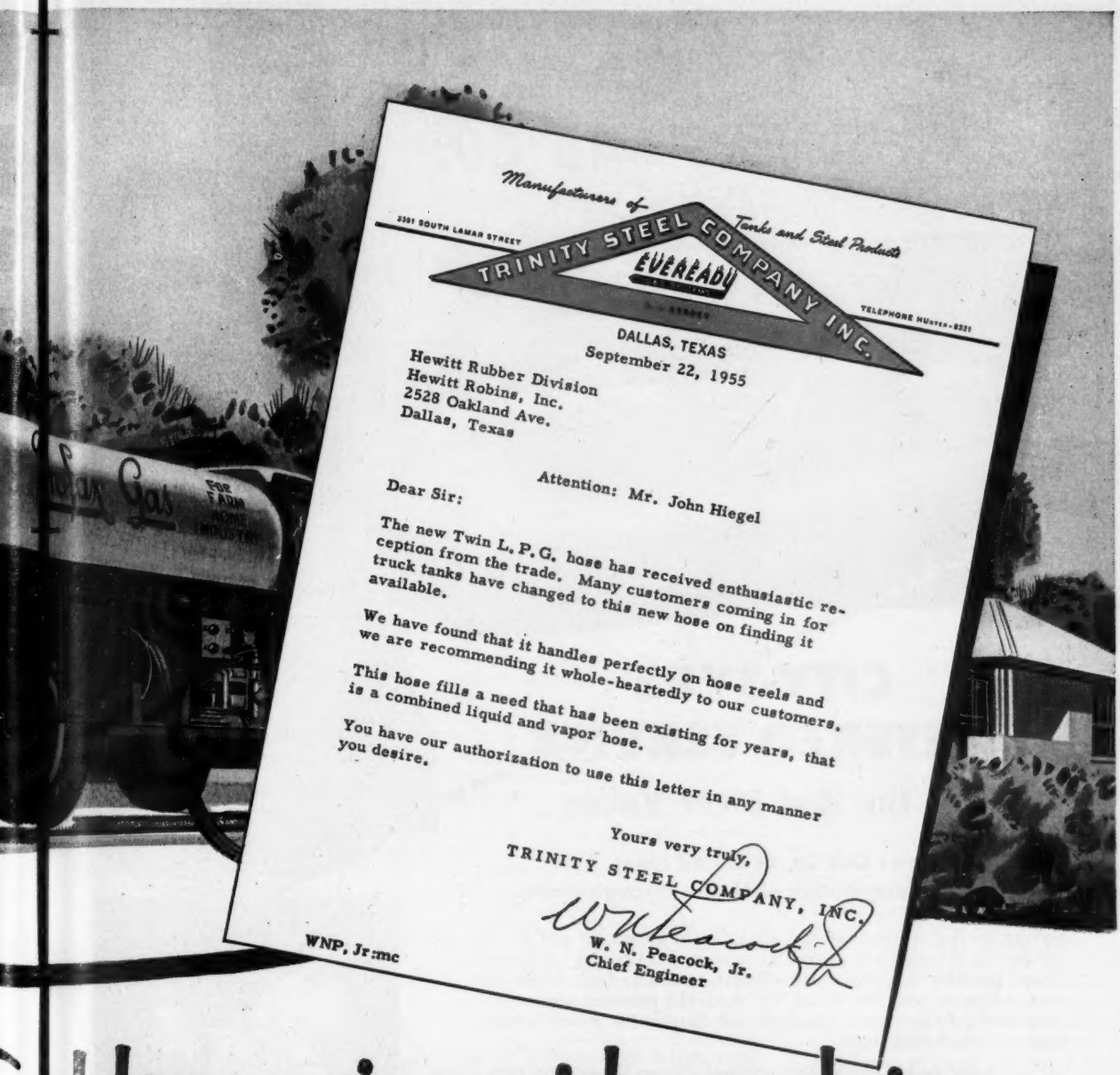
Hewitt-Robins *Twin* LPG Hose has special nonporous synthetic tubes that provide full flow, that resist the permeating action of liquefied petroleum gases. High tensil rayon cord reinforces and adds extra service life to the strong carcass. To dissipate static effectively,

HEWITT-ROBINS INCORPORATED

Member of the LPGA

INDUSTRIAL HOSE · CONVEYOR BELTING · CONVEYOR MACHINERY · VIBRATING SCREENS · VIBRATING CONVEYORS


Manufacturers of
Tanks and Steel Products
2301 SOUTH LAMAR STREET
TRINITY STEEL COMPANY INC.
EVEREADY
TELEPHONE HUnter-8321
DALLAS, TEXAS
September 22, 1955
Hewitt Rubber Division
Hewitt Robins, Inc.
2528 Oakland Ave.
Dallas, Texas
Attention: Mr. John Hiegel
Dear Sir:
The new Twin L. P. G. hose has received enthusiastic reception from the trade. Many customers coming in for truck tanks have changed to this new hose on finding it available.
We have found that it handles perfectly on hose reels and we are recommending it whole-heartedly to our customers.
This hose fills a need that has been existing for years, that is a combined liquid and vapor hose.
You have our authorization to use this letter in any manner you desire.
Yours very truly,
TRINITY STEEL COMPANY, INC.
W. N. Peacock, Jr.
Chief Engineer
WNP, Jr:mc

Hose wins wide acclaim

a spiral wire is embedded in the wall of the hose. The covers are black compound—oil, weather and abrasion resistant; won't harden, crack or peel. The twin lines are readily separated for convenience in installing couplings.

Hewitt-Robins *Twin* LPG Hose is another first from the leading manufacturer of petroleum hose. No more two-reel operation. No more taping of separate hoses on a single reel. No more tangled hose on trays. It is the perfect hose for vapor return delivery systems; can be used on any truck.

Sizes: ½" vapor and ¾" liquid.

Working Pressures: up to 350 psi.

Get complete details. See your classified phone book for the Hewitt-Robins Distributor serving your area.

STAMFORD, CONNECTICUT **Hewitt-Robins**

DESIGN, MANUFACTURE, ENGINEERING AND ERECTION OF COMPLETE BULK MATERIALS HANDLING SYSTEMS

CITY-TYPE METERED SERVICE

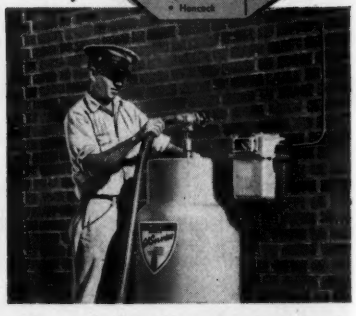
for the Red River Valley

Consumers Gas Co. of Detroit Lakes, Minn. pioneered distribution of LP-Gas through mains.

Serving the highest concentration of LP-Gas customers per unit of area and density of population covered, Consumers Gas Company of Detroit Lakes, provides the ultimate in efficient service to both urban and rural customers with the aid of the watch-like precision accuracy of American® LP-Gas meters. Standard tank distribution is used for customers "beyond the mains".

All customers' tanks are supplied automatically, on the basis of meter readings, assuring uninterrupted city-type service at all times. Customers pay only for what they use, measured by the most accurate method known – the displacement meter. This same exact method of measurement is provided by progressive LP-Gas companies and utilities all over the world.

American LP-Gas Meters are manufactured with the same care that has made American Gas Meters the standard of accuracy for the Gas Industry for 119 years. And American Meter Company has produced more of the 29,000,000 gas meters installed in America than all other manufacturers combined.



Consumers Gas Co. *metered service* is geared to the needs of large or small users in town or beyond the mains. *Every customer can have every modern gas convenience:* cooking, refrigeration, automatic water heating, clothes drying, house heating and incineration.

AMERICAN®
METER COMPANY
INCORPORATED ESTABLISHED 1836

AMERICAN METER CO. EST. 1836

GENERAL SALES OFFICE: 1513 Race Street, Philadelphia • Albany Alhambra • Atlanta • Baltimore • Birmingham • Boston • Chicago Dallas • Denver • Erie • Houston • Kansas City • Los Angeles • Minneapolis New York • Omaha • Pittsburgh • San Francisco • Seattle • Tulsa IN CANADA: Canadian Meter Company, Ltd., Milton, Ontario • Calgary Edmonton • Regina

SUPPLIERS TO THE GAS INDUSTRY for Ironcase, Tinned Steelcase, Aluminumcase and Welded Steelcase Meters • American-Westcott Orifice Meters • Instruments • Reliance Regulators • Provers • Apparatus

LETTERS

Patio Cooking

Ohio

We like to cook on our screened-in patio, using a bottle gas hot plate, and for the sake of convenience would like to contain a gas bottle within a cabinet beneath the stove. Would there be any danger in such a hook up?

M.E.H.

We do not have a copy of the Ohio L. P. gas code, but believe that it conforms substantially to the National Fire Protection Association's Pamphlet 58, which is accepted by nearly all states as the guide for safety regulations covering the installation of L. P. gas containers.

As a matter of practical safety, L. P. gas containers should not be in such close proximity to the burning equipment as would be indicated in your letter. For example, in housetrailer installations, the cylinder is required to be installed outside the walls of the trailer. Cylinder installations at permanent homes must be outside the house walls and may not be located within 5 ft of an opening into the building, measured horizontally from the place of cylinder installation.

In making installations on boats, the regulations require that the cylinder shall be outside the deck house and where there is the least possibility of seepage of gas into any opening leading inside the deck structure. In no case is it permissible to install the cylinder inside a completely enclosed cabinet, and the cylinder base must always be either at or above ground level. We would, therefore, suggest that you install your cylinder not less than 5 ft from your hot plate and preferably on the opposite side of the patio wall.

We suggest that you check your proposed location with the local L. P. gas dealer who will be familiar with the Ohio codes.—Ed.

•

Incinerator Problem

Ohio

We are working on the development of a small 100-lb per hour incinerator and would like to know if it would be practical to use bottled gas to serve as both auxiliary fuel and a means of creating overfire turbulence to eliminate smoke.

Our firing chamber will be 24 in. square. Could we put a manifold in one wall and tap in about six small gas nozzles so that we could have six gas flames penetrating about 15 in. into the chamber? If a timer were installed on the gas valve so that the burners would not operate over 15 minutes, would a bottle of gas last long enough to make this application practical?

F.W.S.

L. P. gas can be used successfully as the auxiliary fuel and the fuel for overfiring. However, the burners for overfiring must furnish both adequate heat and excess air to burn the smoke, unburned gases, etc. Also sufficient turbulance must be maintained to produce thorough mixing so no channeling occurs to allow the unburned materials to escape.

The most successful burners for this purpose are the small blower-mix type.

The burners may be placed on automatic timing; however, the time of burning may vary because of the moisture, type of combustibles and other characteristics may require the use of an adjustable timing device. A 100-lb bottle should serve the unit satisfactorily.

L. P. gas contains about 21,500 Btu per lb or 92,000 to 98,000 Btu per gal. The burner suppliers can advise the rated heat input of their units so you can calculate the time. A 100-lb cylinder holds 100 lb or about 23 gal. of L. P. gas.—Ed.

•

Propane or Oil?

New York

We have a five-section, Hercules, size No. 517 D, cast iron, hot water boiler heating an 8-room house fired by No. 2 fuel oil, and wish to heat with propane gas.

Would it be more efficient to install a new hot water boiler equipped for propane, or should we install a conversion burner? If the new boiler would be more efficient, would it be enough so as to justify the additional expense that would be incurred?

C.E.D.

We believe it would be best to write the boiler manufacturer and get his advice. You should include the serial number of the boiler in the information you send to him as well as the size, type, and model number. If there is any specific information on the oil burner such as name of manufacturer, type, model, and serial, it will be advisable to include it in your letter.

The reason we suggest that you contact the boiler manufacturer is that they may have a good gas burner that they use on their gas-fired models and they can also recommend any changes in the baffling or in the firebox that will improve the efficiency of the boiler on gas.

We believe the old boiler, unless it is extremely old, when converted, will do a good job. We do not have enough information available to make a good comparison.—Ed.

•

LPG Vs. Diesel Fuel

Florida

Would you please advise me what price a butane-propane mixture of 70% butane and 30% propane would have to sell per gallon to compare with No. 2 diesel fuel at 14.4 cents per gallon?

This would be used in a steam boiler for laundry purposes.

S.B.L.

A 70% butane-30% propane mixture has a heating value of approximately 97,000 Btu per gallon. No. 2 oil has a heating value of about 140,000 Btu per gallon. On a direct heating value per gallon basis the cost of the L. P. gas would need to be 97/140 of 14.4, or 10 cents per gallon.

However, they should not be compared on this basis because the gas will be burned more efficiently than the oil. Comparative tests have shown gas to be the more efficient fuel in small boilers. Conservatively, the efficiency may be 15% better. This means that gas should break even with the No. 2 oil at about 11¾ cents per gallon.

Other factors such as electric power for burner and pump operation, burner repair, and maintenance, cleanliness, etc., should be considered.—Ed.

•

Greenhouse Heating

Nebraska

We have had a question come up which we are not quite able to answer conclusively and it occurred to us that you might be able to supply the necessary information.

The question involves the heating

For Irrigation or Injection Fertilizing with Anhydrous Ammonia

AMPSTEEL

...HAS THE ANSWER

Safety...ease in handling... cross-loading ... stacking, are just some of the features of the AmpSteel Recessed Head Tank.

RECESSED HEAD TANKS

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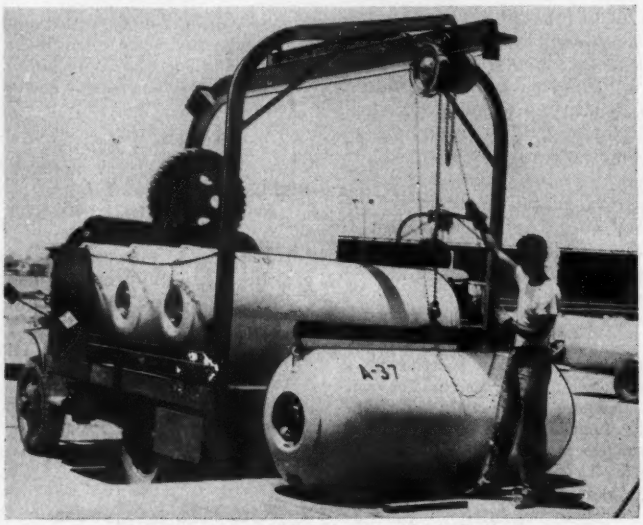

Picture above shows equipment of P.J. Aguirre, Mexicali, Mexico.

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Fannin Gas and Equipment Co., Phoenix, Arizona, using AmpSteel Tanks exclusively, transfers five or six tanks in one trip.

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AmpSteel Top-Connected Tank mounted on four-wheel trailer built by Coachella Valley Ginning Company. This California concern uses AmpSteel tanks exclusively. The same type of tank is also successfully used on two-wheel trailer by Nitrogen Distributors, El Centro, California.

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AMERICAN PIPE AND STEEL CORPORATION

2201 WEST COMMONWEALTH AVENUE, ALHAMBRA, CALIFORNIA • CUMBERLAND 3-2181

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Lack of adequate ventilation seems the main cause of trouble in greenhouse heating work.—Ed.

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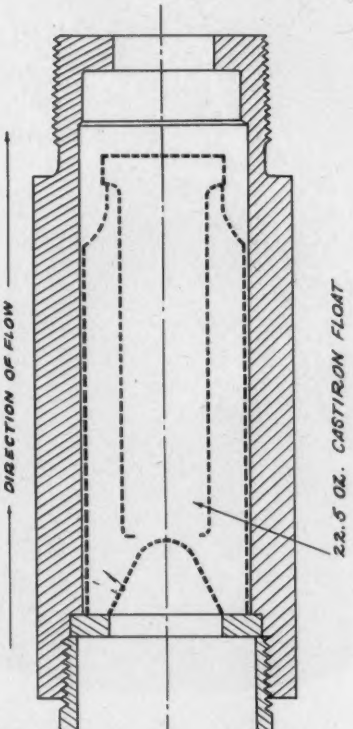

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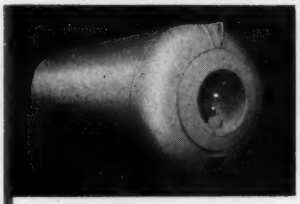

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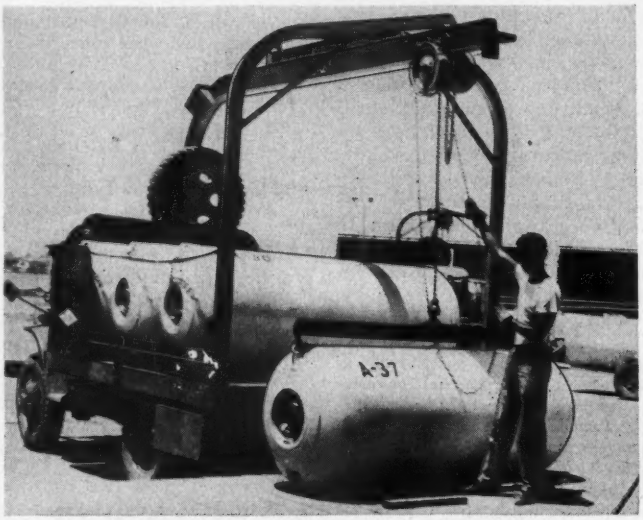

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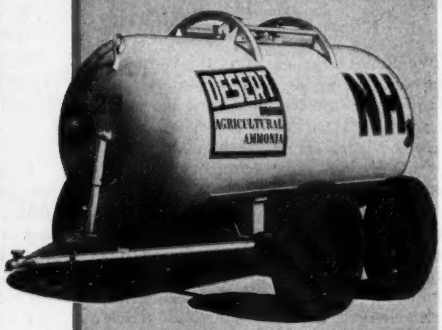

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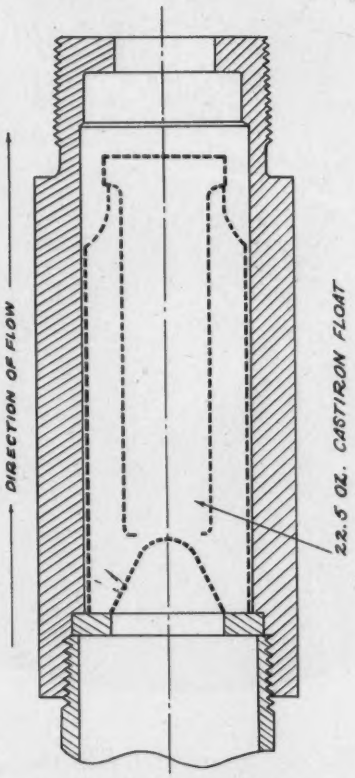

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season's greetings...

To our many friends throughout the industry
We extend
Our sincerest wishes for a
Merry Christmas
And a Prosperous New Year.

TULOMA GAS PRODUCTS COMPANY

PHONE CHerry 2-3261 • BOX 591 • STANOLIND BUILDING • TULSA 2, OKLAHOMA

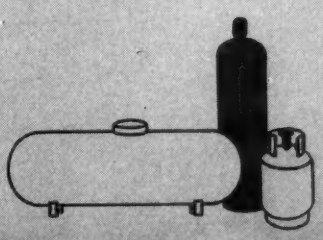
DECEMBER

BPN Beyond the Mains

THE "GOOD OLD DAYS" ARE GONE FOREVER, THANK GOODNESS. As one who grew up on a farm before country living went modern, the memory of the endless drudgery that has since been taken out of rural life is still vivid. There was the battle with the woodpile that we could never win; the vicious cycle of hay to support horses so we could produce more hay; the endless cleaning up after the horses and the hay; the problems of water for the house and the stock when the windmill stopped turning or the pump broke down; the lonesome miles between the farm and town; the three-mile trip to the one-room school.

In a little more than a generation farming has emerged from that crude, miserable way of life to a way of living that retains all that was good in the past, and adds advantages that could not even be had in city living just a few years ago. The city limit sign is no longer the outer boundary of comfort, convenience, culture, education, commercial opportunity, or recreation. It is just the end of a special tax district. Modern communications, transportation, power, sanitary plumbing, domestic appliances and "city gas for country homes" have erased the differences. The change is so complete that you cannot even tell the farmer's wife and daughter from their city cousins. Our industry has played a vital part in this great change. We point with pride.

THE FUNERAL OF THE OIL HEAT INDUSTRY HAS NOT YET BEEN HELD. And judging from the activities of the Oil Heat Institute it will be some time before lilies and those last kind words will be in order. Within the past few weeks the institute has sponsored a Builders' Clinic Management Conference at Rutgers University with an impressive panel including the editor of a leading home magazine. Its purpose was to set up a program to combat the inroads of gas in the domestic heating field, with particular emphasis on quantity production housing, of course.



Continued . . . ⟶

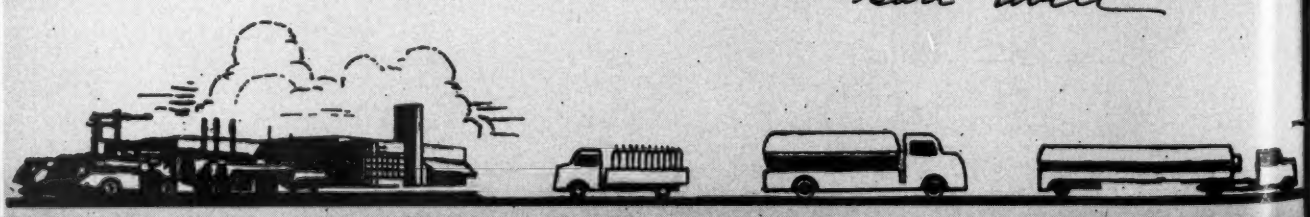
Two elements of the five-point oil heat program emphasize the weakness of their position. They recommend wet heat systems to eliminate the gas water heater from the home. Wet heat is more expensive to install, but it provides hot water without a special heater -- if you want to operate the boiler all summer to have domestic hot water. And to keep gas out of the kitchen they recommend the installation of electric ranges and dryers, which are of course more expensive to install and to operate. Around these recommendations, with impressive hooey, they build a smoke screen of "ultimate economy for the consumer" and "keeping the purchase within the buyer's ability to pay." We will not buy that one, and one of the panelists, a builder, said, "Buliders are not going to put in electric ranges unless they are forced into it."

We respectfully suggest that this situation should be taken in hand by the officials of the LPGA and the AGA, as part of the recently arranged "unity program". Fire can be fought with fire, and without all this "oil smoke', which used to be called something else. It's time to head off this campaign to deprive customers of the benefits and economies of gas. And make no mistake -- the purchaser of a home with all electric appliances and gas heat will not be a gas customer for a good many years.

HE TAKES THE WORDS RIGHT OUT OF OUR MOUTH. We wish to thank Dr. L. L. Waters of the University of Indiana for what he said at the Alabama LPG Convention. We quote: "The bigger you get , the less you work with your back and the more you work with your head. Stomach ulcers may succeed backaches . . . . I assert that the value of publications in the industry and meetings of this sort will increase many fold in the years ahead. The more complicated business becomes the more you must be informed and the more you must rely on others for expert advice. . . . Your competition is both local and businesslike, and national and political like."

AND WE WISH YOU ALL A MERRY CHRISTMAS AND A PROSPEROUS NEW YEAR.

Karl Abell



FISHER® Type 722V TANK REGULATOR

. . . Largest capacity of any regulator of this type in the industry

Type 722V is designed especially for large loads on 500 and 1000 gallon tank systems. It has the largest capacity (680 cfh or more) of any regulator of this type in the industry. It is an exclusive with Fisher—*there is no comparable regulator* on the market.

Large diaphragm, powerful leverage and large orifice make the Type 722V regulator highly freeze resistant.

Type 722V reduces tank pressure down to 11" water column (single stage). High pressure Type 722VH reduces tank pressure to 10 pounds as the first stage on two-stage service. ¾" pipe thread or POL inlet, ¾" pipe thread outlet.

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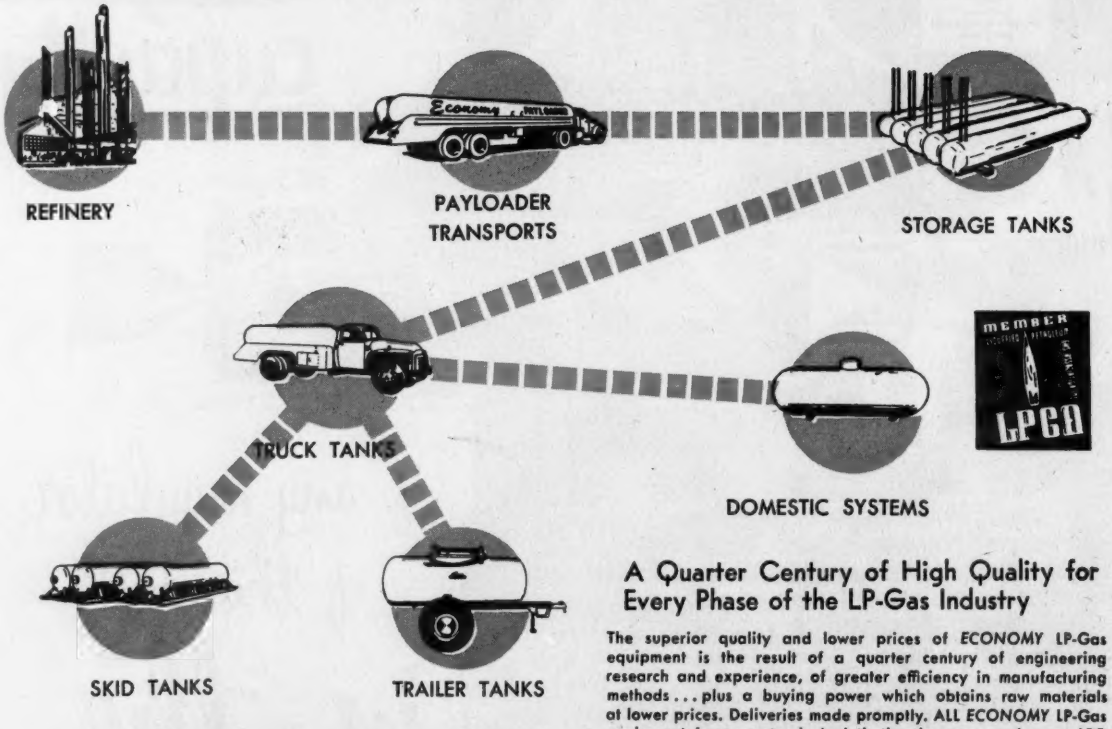

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LPG Does More Than Just COOK Your Christmas Turkey

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IT'S true that a lot of LPG is necessary to roast that Yuletide turkey. But, in many cases, LPG will already have played an important role long before the succulent bird reaches the oven.

Take the case of Pavo de Grande turkey ranch at Beaumont, Calif. Here, thousands of turkeys are raised for Christmas, Thanksgiving, and other festive occasions. The process starts when the day-old poult huddles under the welcome warmth of an LPG-fired brooder, and is completed when the well-rounded, full-grown turkey hen or "Tom" is ready to go to market.

Turkeys are far from easy to raise. Anyone who has attempted to nurture these delicate birds to maturity will agree on that point. When young, they must be housed in a building in which the temperature is carefully and evenly controlled. Their surroundings must be free of excess moisture and dust. Even the temperature of their drinking water is critical, and must be painstakingly held above a prescribed point. Feed must be of exactly the right formula for optimum results, and it must be doled out in ample quantities.

At Pavo de Grande, Inc., reportedly the world's largest turkey ranch, LPG is simplifying several of these tasks for Harold A. Sparling, corporation president. Young poults, brought from the hatchery the day after they hatch, are housed in three long, parallel brooder houses. Two of these low, wooden structures are 570 ft in length, while the third is 330 ft long. Each of the buildings, which are separated by turkey yards and roadways, is 30 ft wide. Roofs of the houses slope gradually upward to ridge poles, located two-thirds of the distance from one wall to the other. A vertical louvered step at the roof ridge provides ventilation for each building (see photo of brooder house interior), and by necessity, complicates the heating problem in cool weather. In a sense, this louvered step divides the building into two heating zones running the length of the building—one wide one and one narrow one.

A "Reliable" 30,000-Btu brooder is suspended from the roof timber at each 10-ft station throughout the length of the building. With extra brooders at the ends of the brooder houses to compensate for drafts, 150 brooders in total handle the job of keeping young poults safe during the cool nights that prevail in the area. To furnish more uniform heat throughout the buildings, brooders are staggered in a two-to-one pattern. The interior view shows how two brooders are suspended from roof timbers in the "wide heating zone," then one unit in the "narrow heating zone," two more on the wide side, and so on. This seemingly uneven distribution of brooders compensates for the different widths of the two "heating zones."

Brooders are suspended from roof timbers by steel clothesline or chain and pulley. When the newly hatched poults are first brought to the brooder house, reflectors are lowered to within 12 in. of the floor. After approximately one week, the reflector is raised slightly to allow for the in-

creased height of the growing poults. This process continues as the young turkeys continue to require more space.

Experience has taught Pavo de Grande management that chain suspension of brooders has several distinct advantages over the use of ordinary rope or cord. First, by counting the number of links as brooders are periodically raised, attendants are able to obtain more uniform reflector heights throughout brooder houses.

Secondly, poults are protected from the danger of falling brooders resulting from singed or frayed cords. In the past, other less careful turkey ranchers have been known to suffer the loss of dozens of young turkeys, and even entire brooder houses, when poorly suspended brooders have come crashing down on helpless poults, setting fire to combustible materials.

When the new batches of poults are brought from the hatchery, they are segregated in groups of 325 by means of corrugated cardboard enclosures around each brooder. Each enclosure is 10 ft in diameter and 2 ft high. Over the dry, freshly spread sand forming the floor of each enclosure is spread a layer of "Bearclaw," a rough-finished paper that provides steady footing for the tottering young poults, and helps to add to the warmth of their new home.

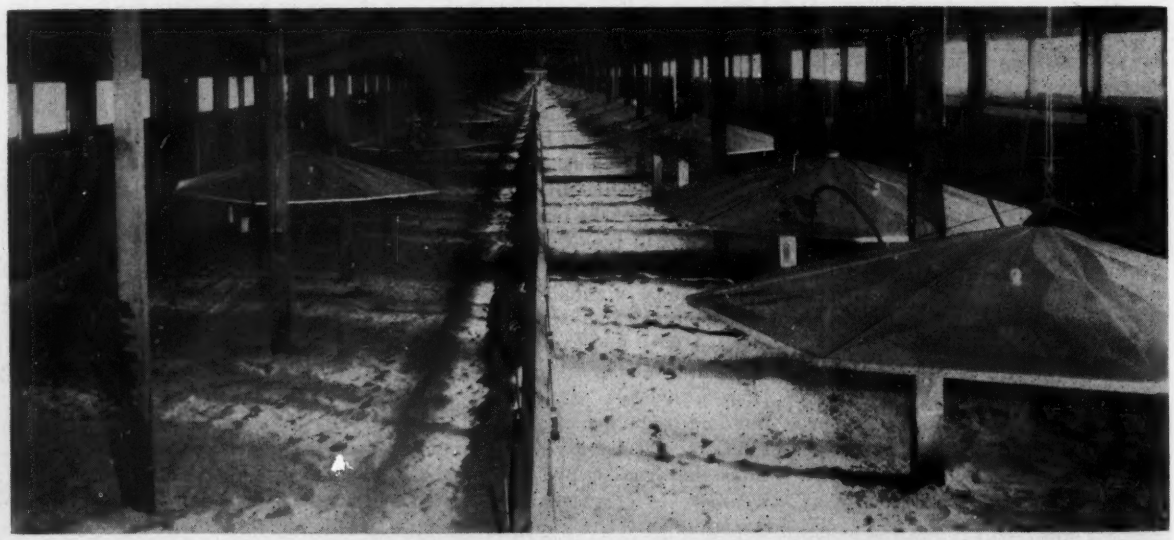
During the batches' first week in the brooder house, the LPG-fired brooders burn almost continually, maintaining the immediate temperature around the young birds at 95° F. Throughout this first week, feeding is done "by hand" — that is, six 3-ft metal troughs are placed in each enclosure by hand. This type of feeding is in contrast with the automatic vibration feeding system that is brought into play later on.

Six 2-gal. water troughs are also placed in each enclosure, and provide drinking water during a critical period. Here again LPG plays an important role. During their first few weeks of life, poults require lukewarm drinking water. If their drinking water is not heated, the young turkeys' metabolism is liable to become upset, causing many to die, and others to remain sickly. Also, another serious problem in the turkey raising business has lately been linked with improperly heated drinking water. When the yolk, which nourishes the newly hatched poult, is not properly absorbed by the system, the young bird becomes what is known among turkey ranchers as a "yolker" (no pun intended). Certain heredity factors play a large part in determining whether or not a young bird will become a yolker, but indications point to unheated drinking water as another important factor. The life expectancy from here of such an ill-fated young turkey is usually five or six days.

Lukewarm water tends to assure the absorption of the yolk of the newly hatched poult, and a strong, healthy body results. To provide a constant supply of heated drinking water during this critical stage of the turkey's life, five General water heaters were installed adjacent to the brooder houses. One 75-gal. water heater is housed next to the 330-ft brooder house in an upright corrugated metal shelter the size of a telephone booth. Two similar installations are located next to each of the larger buildings. Thermostatic control on each unit insures adequate amounts of safely warmed drinking water which is piped into the buildings. Heated water is mixed with cold to attain lukewarm water for filling drinking troughs.

At the end of the dangerous first-week period, poults are ready to be de-beaked. Beaks are trimmed back to the nostrils and seared. This chore is performed quickly and painlessly by a de-beaking machine, and eliminates cannibalism—another of many threats to the maturation of your Christmas turkey. When de-beaking is completed, cardboard enclosures are removed and 975 blunt-beak poults (minus casualties) are free to roam their 30-ft bay, bounded on either end by framed wire partitions.

At the same time, brooder reflectors are raised a few inches, and the temperature inside the brooder areas is now held to approximately 90° F. Hereafter, the temperature at which the brooder areas are maintained is reduced by 5° each week



This interior view of one of Pavo de Grande's brooder houses shows a seemingly endless row of LPG heated bays. The automatic vibrator feed dispensing system may be seen near the center of the floor. Above it and toward the left wall is the louvered ventilating step in the structure's roof. Cord and pulley systems for raising and lowering brooder reflectors are evident, as is the ¾-in. pipe which feeds LPG to burners.

until the end of the fifth week. At this time, brooder burners are turned off, except for the pilot lights. If the temperature drops to 55° F or colder during a chilly night, burners automatically come back on and raise the temperature above the danger point.

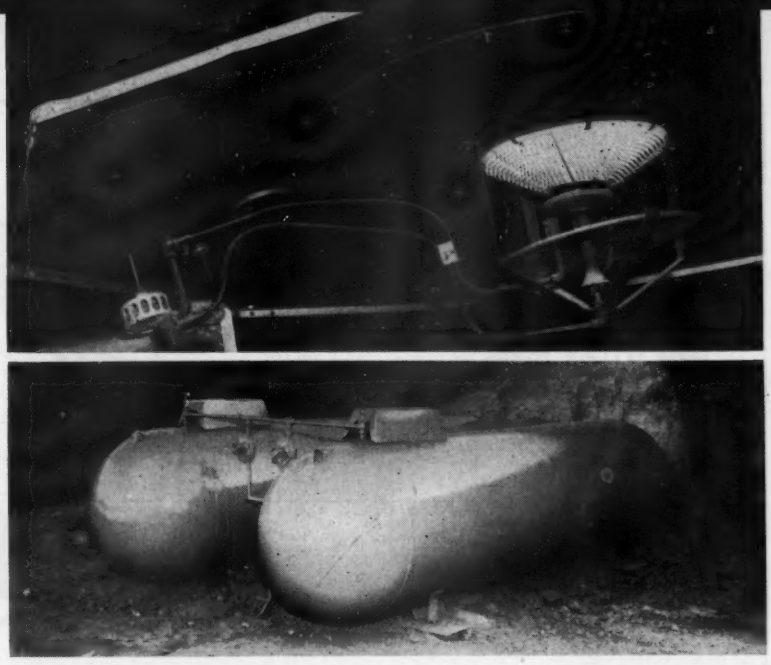
Each brooder is equipped with a thermostat as shown in photo of the underside of the brooder. Beside each is hung a small thermometer by means of which the functioning of the thermostat may be periodically checked. Brooder burners are lit by hand as each new batch of poults is brought into the brooder houses, and remain operative until the flock is ready to leave for the field ranges.

LPG for the Pavo de Grande operation is stored in two 1000-gal. tanks located near the brooder house area. Two regulators, mounted in parallel between the tanks, reduce the pressure of the gas to 10 psi. Steel pipe of ¾-in. inner diameter lead the LPG to points inside the brooder houses, and to the water heaters. Inside the buildings, gas pressure is further reduced to 6 oz, at which pressure it enters the brooder burners. The 330-ft structure is equipped with two regulators while each of the longer units has four. Located at intervals throughout the buildings, the regulators feed to common gas lines extending the entire length, and more nearly balanced pressure to brooder burners results.

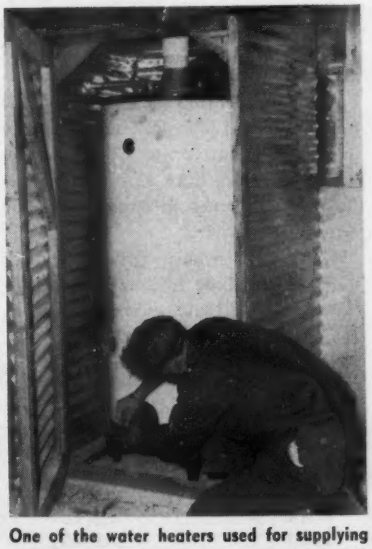
A safety feature also results from this arrangement of regulators. If one regulator should freeze up, the gas supply to brooders is not shut off. Mr. Sparling is particularly thankful to Petrolane for the multiple regulator arrangement because of an unfortunate experience on a previous turkey ranch. Here, Mr. Sparling's brooder house was equipped with only one regulator. Condensed water in the gas line froze during a particularly cold night, shutting off the gas supply, and 2500 poults were badly chilled. Many died, and much sickness resulted in the surviving flock.

At present, Pavo de Grande starts a new batch of poults each week, during the raising seasons. A flock of approximately 7000 choice adult birds is maintained from one season to the next for breeding purposes. A total of 60,000 turkeys can be handled at one time.

Under current operations, eggs are shipped out to a nearby hatchery soon after they are laid, and the tricky job of hatching is accomplished under carefully controlled conditions by experts in this highly specialized work. Temperature inside this hatchery must be carefully maintained, and LPG was also chosen to perform this task. Mr. Sparling reports that he has been fortunate in maintaining a low fatality rate among his turkey flocks, and gives a large part of the credit to LPG. He plans to equip future facilities with LPG heating. Many other turkey ranchers in the area are following suit.



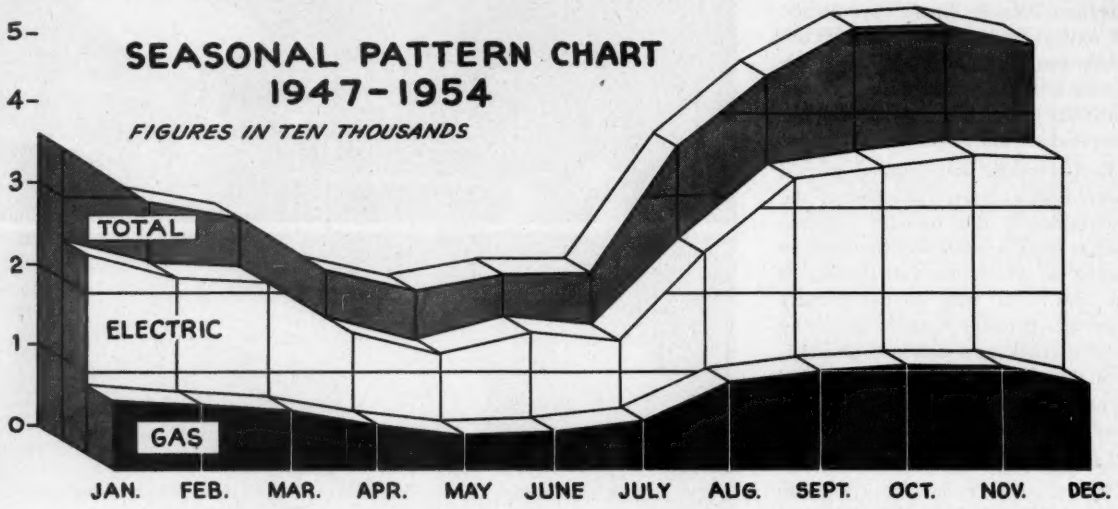
The close-up of the underside of a brooder (above) shows the main LPG burner, and beneath it, the pilot. To the left is the thermostat, and the thermometer used for checking its proper functioning. Brooders are rated at 30,000 Btu each. Two 1000-gal. tanks (below) supply LPG for brooders and water heaters at Pavo de Grande. A parallel system of gas regulators and outlet pipes insures a steady, uniform supply of gas to brooder houses.



One of the water heaters used for supplying drinking water. Lukewarm water from such heaters prevent "yolkers" among newly-hatched poults.

As far as the Hemet branch of Petrolane, Ltd., is concerned, this trend to LPG is fine. Pavo de Grande Ranch, for example, has provided an excellent gas load during crucial months of the year. Throughout the months of June and July, low points on the average year-round LPG sales chart, the ranch consumed a total of more than 11,000 gal. of gas. The first batch of turkeys was brought to Pavo de Grande last March, and during the period ending July 31st, a total of 35,000 gal. of LPG was delivered by the Petrolane branch plant in Hemet.

No great amount of sales effort was necessary to put Pavo de Grande on LPG. Mr. Sparling had operated previous turkey ranches, and had first-hand evidence as to the value of LPG for such applications as brooders and drinking water heaters. Some of the newer turkey ranchers in the area have been more skeptical during the initial contact by Petrolane salesmen, but satisfied customers are providing the required word-of-mouth advertising. Gas sales to turkey ranches are constituting a substantial load balancing factor for Petrolane. And southern California residents who happen to buy a Pavo turkey this year can thank LPG for "preheating" their Christmas dinner. ■



Ample Share of 5.5-Million-Unit Home Laundry Market is Still Open To Gas Clothes Dryer Sales

In 1946, 3739 clothes dryers, both gas and electric models, were shipped by manufacturers to their dealers. An all-time high of 1,250,000 has been forecast for 1955 and with the first eight-month figure at 728,624, the clothes dryer people anticipate sales of more than 500,000 units during the traditional peak season of the industry — September through December (see seasonal graph).

In appraising the outlook for the industry he represents, W. Homer Reeve, president of the American Home Laundry Manufacturers Association, in his mid-year report* cited the unprecedented trend in population growth as the most significant factor affecting the industry today. Just this summer the population of the United States passed the 165 million mark. Population is growing at the rate of 2.5 million persons a year, creating an annual new demand for equipment for some 800,000 additional households.

*Presented at the summer meeting of AHLMA at The Homestead, Hot Springs, Va., in July.

The fact that nearly every available wage earner is employed is obviously a good omen for those who sell to consumers.

The gain in the number of families with personal income from $2000 to $5000 was only 1% between 1944 and 1953, while the gain in the number of families in the $5000 to $10,000 bracket was 182%; in the $10,000 to $15,000 bracket it was 222%. Today there are more than 21 million families with incomes in excess of $5000 annually.

Consumer prices, however, have held steady since 1952 at about 114% of the 1947-1949 averages. Thus, while families tend to earn more, they are also able to buy more with what they earn.

It is not surprising that in this setting the home laundry appliance manufacturing industry is enjoying overall production that may lead to the greatest year in its history. Factory sales of washers, ironers, and dryers are running 34% above a year ago. If these gains continue throughout 1955 the largest gain in its history may be expected by the industry.

The previous high year was 1950, when just over 5 million washers, ironers, and dryers were shipped.

Clothes Dryer Sales — 1946-1953

	Total	Electric	Gas
1946	3,739	1,908	1,831
1947	58,077	37,713	20,364
1948	88,099	72,940	15,159
1949	105,727	80,538	25,189
1950	318,488	250,977	67,511
1951	486,655	348,658	137,997
1952	614,677	453,933	160,744
1953	696,468	537,921	158,547

A survey conducted in the first quarter of 1955 indicated that market research people expected between 4.5 million and 4.8 million home laundry appliances to be sold when they made the forecast. At that time, they expected a good year but not a peak.

A survey made in July, however, indicated that the industry's forecasters had raised their sights considerably. The most optimistic prediction last March was for 4,825,000 washers, ironers, and dryers. Now the highest forecast in the industry is 5,580,000 home laundry appliances, with 1,250,000 of this figure for clothes dryers.

July Forecasts

The median of the July forecasts was 5.3 million and all but two of the forecasters predicted that 1955 would be greater than the 5 million home laundry appliances sold in reaching the 1950 peak. The median or middle-average of the predictions as of now, aside from dryers, is that about 3 million automatic washers and 1.1 million conventional washers will be sold in addition to some 80,000 ironers.

Further confidence in the future is evidenced by announcements of top managements of member companies of AHLMA of many millions which they have recently invested or are about to invest in plant expansion. One company has completely rebuilt its home laundry factory, enlarging and modernizing it without stopping production. Another has purchased one $4 million plant and is investing $2 million more in expanding present facilities. Still another is building a huge new warehouse to aid in leveling production and stabilizing employment. Others are also expanding or improving production facilities.

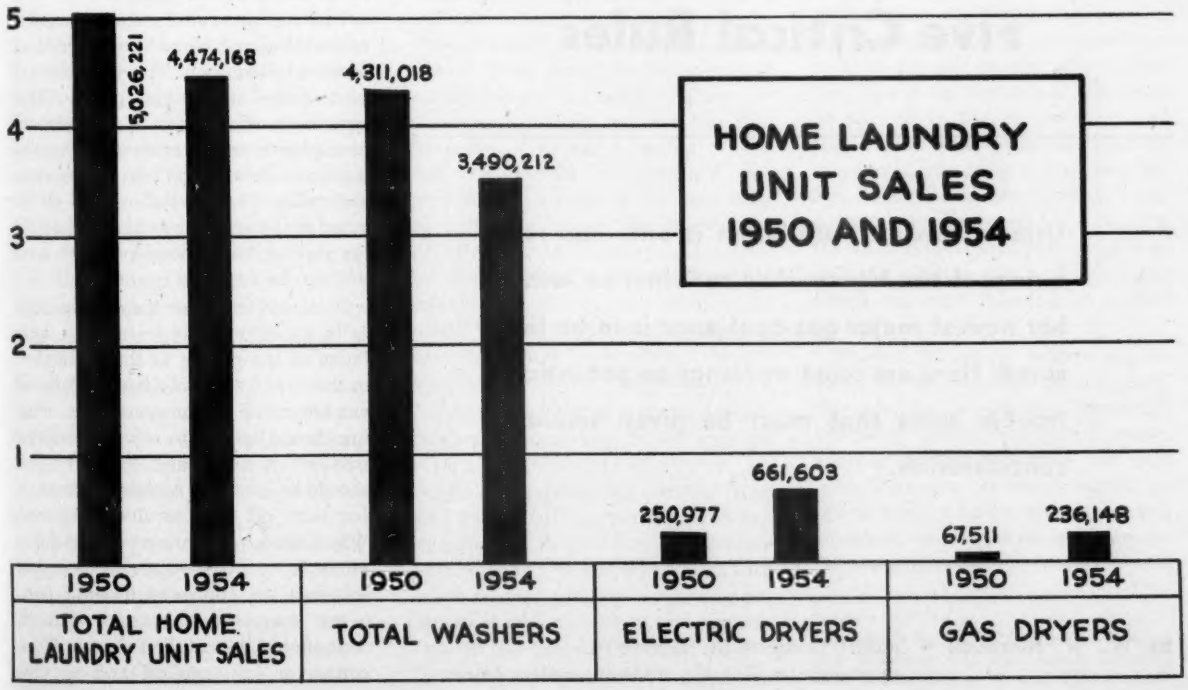
Production and Sales

The production and sale of home laundry appliances are increasing, not only because business is good, but for other reasons:

While the home laundry industry was increasing 34% in the past year, the gross national product increased only from $355.8 billion in the first quarter of 1954 to $369 billion in the first quarter of 1955, an increase of about 3%. Manufacturing production gained faster than the gross national product. The Federal Reserve Board's Index of Industrial Production grew from around 123 in the first three months of 1954 to 135 in March 1955 — a gain of only about 10% to compare with the home laundry industry's 34% increase. Even the appliance manufacturers index, computed by the research department of Fairchild Publications, was reported in April to be only 22% above the 1954 level. ■

Clothes Dryer Sales — January-December 1954

	Total	Electric	Gas
January	82,195	60,493	21,702
February	62,488	46,992	15,496
March	54,796	39,526	15,270
April	37,661	26,794	10,867
May	26,533	17,621	8,912
June	30,297	20,178	10,119
July	40,755	27,413	13,342
August	80,165	57,844	22,321
September	107,084	79,421	27,663
October	122,182	93,261	28,921
November	138,254	101,672	36,582
December	115,341	90,388	24,953
TOTAL	897,751	661,603	236,148



To Keep Clothes Dryers the Wonderful Boon They Are Intended to Be, Obey These Five Critical Rules

Utmost care in installation is only one requisite if the housewife's satisfaction with her newest major gas appliance is to be insured. Here are some warnings on potential trouble spots that must be given serious consideration.

By W. W. Marshall • Superintendent of Service
Minneapolis Gas Co., Minneapolis, Minn.

TODAY'S automatic gas clothes dryer makes it possible for household routines to be arranged to suit convenience, as clothes can be washed and dried within a couple of hours. Wash day worries and drudgery have been eliminated for the modern homemaker.

The technical men of the manufacturing industry and the gas industry, have met many problems, and through their efficiency and vision, have developed new modern appliances, designed for easier and better living. The automatic gas clothes dryer is one of the leaders.

In the case of the clothes dryer, customer satisfaction is of utmost importance. Future sales depend upon this, and in order that it is not overlooked, five factors must be considered:

(1) Proper selection of the dryer
(2) Careful installation
(3) Thorough operating instructions to the customer
(4) Good housekeeping
(5) Servicing by trained personnel.

Factor No. 1 is a sales responsibility meaning sell the dryer that will meet the customer's requirements.

Factor No. 2 "careful installation," means that the installation must be such that the full capabilities of the dryer can be realized. How does careful installation affect service?

First, in a careful installation, local building codes must be considered and complied with. The dryer must be installed in the right place. The proximity of the gas and electrical connections and location of the washing machine must be taken into consideration. The dryer should be so located that it will be readily accessible for service, and where moisture and lint can be expelled harmlessly.

In recent analysis' of dryer service calls, 4% of the calls pertained to gas leaks in the piping to the dryer, or in the dryer assembly itself. Careful workmanship can prevent this. Piping should be run in a workmanlike manner. A union and shut-off cock should be installed within easy reach for turn off and service purposes. When flush wall connections are made in utility rooms or laundry schemes, an approved flexible connector may be advisable. A shut-off cock should be installed ahead of the connector for turn off and service

Clothes Dryers... Lint is a major source of trouble in many locations on the dryer

purposes. Leaks in the dryer assembly itself, of course, can be prevented by more careful assembly and inspection.

Moisture Exhaust

The matter of moisture exhaust is one of prime importance. The temperature of the air affects its ability to hold moisture. In the dryer, air is drawn in, heated and circulated around the drum. This moisture-laden air is then exhausted by the blower, along with free fine lint. It is highly desirable that this moisture and free fine lint be exhausted out of doors.

The analysis showed that 6% of the calls pertained to the exhaust system. 72% of these calls pertained to the exhaust system not being able to function as it should due to lint accumulation in the system. The balance pertained to customer advise and some unknowns.

What can be done to prevent this lint accumulation in the exhaust system? The inside of the vent must be smooth. It must be kept as short as possible, and be free from unnecessary bends, and obstructions. Protruding tinner screws catch and hold damp lint and build an obstruction. Rough elbows and improperly fitted joints do the same. The joints should be slipped together facing downstream from the dryer, and the joints taped. The vent must not be too long since too much friction to flow will cause free lint to drop out in the vent. It is obvious that installation does affect service.

The analysis showed that 11% of the calls for the vent pertained to draft conditions. A suitable exhaust hood should be installed at the termination of the vent outside the building, to prevent wind, rain, and foreign matter from entering the vent system. The hood should be properly dampered.

Electrical connections should conform with local codes. Dryers are equipped with plug-in cords, and present no problem if there is a receptacle at the dryer location. The use of extension cords should be discouraged. If there is no receptacle at the dryer location, a much neater and safer installation can be made by running approved conduit, and installing a receptacle at the dryer location. The manufacturers instructions as to proper grounding of the unit should be followed. Overloaded circuits should be avoided.

How does factor No. 3 "thorough operating instructions to the customer," affect service?

Service and Advice

The analysis showed that 8% of the calls pertained to requests by the installer to adjust and check out new installations, about which he was not familiar. The 14% were requests from the customer where there was nothing wrong, but advice as to operation was needed.

Customer instruction is an important installation factor. It affects the satisfaction and confidence the customer will have in the dryer. The customer does not have to know the location of every bolt and nut, or even the operation of all the controls, but should know how the dryer operates, what its limitations are, and its use and care. Dryer manufacturers provide instruction booklets and various guides. Time should be taken to explain these to the customer. They are easier explained by showing. The importance of proper cleaning of the lint trap should be explained. So should the settings of the temperature dial and timer. Explanation of dryer rates, and how the time for drying depends on the amount of water left in the clothes, should also be made. The complete operating sequence should be explained before the customers first operation.

Factor No. 4, "good housekeeping," is another important factor and has a very direct bearing on service.

The analysis further showed that 23% of the calls pertained to lint accumulation. Lint is a major source of trouble in the following locations: pilot, burner, ignition coil, vent, solenoid or motor switches, and exhaust fan. In the case of unvented dryers, lint also greatly affects the operation of other gas burning equipment.

Many lint troubles can be prevented by good housekeeping on the part of the customer, meaning that the dryer should be kept clean. The area around the dryer should be kept clean. A few minutes should be taken after each operation, to thoroughly clean out the lint trap. It is a good practice to wipe off dust and loose lint from the burner and control sections, from time to time. Manufacturers should continue research in design, keeping such things in mind as no open contact switches, non-aerated pilots, better trapping of lint, better air inlets off the floor, away from lint and foreign matter and panels that are easier to remove for cleaning.

Factor No. 5 "servicing by trained personnel," is an all important one. Upon this factor depends the success of the dryer and its acceptance by the customer. The analysis showed that the basic controls required 17% of the service, electrical controls required 20% of the service, and miscellaneous service which included cabinet and hardware repair 13%.

Thorough Training

To perform this service very thorough training is necessary. It is inconceivable that a serviceman can be called upon to service all makes of dryers without thorough training. He must not only know the function and purpose of a dryer, but must also understand the theory of evaporation, and room ventilation. He must be trained in the construction and operation of timers, thermostats, limit controls, gas valves, automatic pilots, electric and gas ignition, warp switches, transformers, and motors. He must understand and be able to read wiring diagrams, and be able to check out control sequence to find trouble.

Public attitude is determined by quality of service. With proper selection, careful installation, thorough operating instruction, good housekeeping, trained servicing, and with manufacturers researching to improve their product, the dryer will remain a most wanted and successful gas appliance. ■

Adapted from a talk presented before the American Gas Association Research and Utilization Conference, Cleveland, O.

How's anhydrous ammonia?

How far has it come, and what is its fate?

How do sales hold up, and what will happen if your farm income declines more?

These are some of the important questions that the L. P. gas distributors are asking themselves at the close of the year 1955, and here are some answers:

Business has been good all year. Demand has increased, but supply has overtaken demand—and passed it.

The anhydrous ammonia business started slowly, everybody feeling his way. It was guesswork with the dealer and the farmer was in the dark as regards the results of applying this fertilizer to his soil.

But the operator learned fast how to store and handle the product and what finances he needed.

The sales? They started booming as soon as crop yields took the tremendous increase under the nitrogen influence. No good word ever spread faster. And none was ever more justified.

Farm income is down—and may go still lower. But few farmers who have once applied AA to their fields will reduce their orders for next year. Rather, they will curtail elsewhere, if curtailment there must be.

So, the LPG distributor who jumped into the AA business (if he practiced good business principles) has prospered, even sometimes finding the sideline has become greater in volume than the former main line.

Has production caught up to demand?

Is it expedient for the LPG distributor to handle AA as a combination business?

By Lynn C. Denny
Associate Editor

DURING the last several years liquefied petroleum gas distributors in increasing numbers have been establishing themselves as retail distributors of anhydrous ammonia.

Partly because anhydrous ammonia has certain physical characteristics similar to L. P. gas, and mostly because of the rapidly pyramiding demand for AA by the very farmers who were already customers for butane or propane, the liquefied petroleum gas operator has realized that he could take on this "sideline" with a fair measure of assurance that he could adequately handle such an operation and that he could make it profitable.

So LPG distributors in rural areas where soil conditions could be improved by the application of a nitrogen fertilizer began establishing AA bulk plants alongside their butane and propane storage tanks, and investing in the necessary transports, delivery tank truck units, application equipment and field tanks for farmer storage.

What many did not realize at first was that large investment capital was necessary to set up in a sufficiently big way to make operations profitable. The largest first outlay was for bulk storage, for it developed that anhydrous ammonia manufacturers would supply product only to cus-

"LPG distributors in rural areas where soil conditions could be improved by the application of a nitrogen fertilizer began establishing AA bulk plants alongside their butane and propane storage tanks . . ."

tomers who were able to receive shipments every month of the year. As the application seasons were usually limited to several weeks two or three times per year, this required distributors to provide bulk storage sufficient to hold their monthly allotments during the many months when there were no deliveries to the farmer.

Economically Sound Operation

Storage for 60,000 gallons of AA proved to be about the minimum that a distributor could provide to permit an economically sound operation, although some firms have gotten by on half that volume, especially when it has been possible to fill farmer field tanks in advance of the application season.

However, few industries have seen a faster demand established for product than has developed for anhydrous ammonia. Until this past year there was a shortage of this fertilizer that plagued dealers everywhere and, of course, reduced their sales volume, though not their overhead costs.

Greatly increased production facilities which were attained during the last year and a half have changed all this and now supply and demand are in reasonable balance, even though requirements for farmers have advanced measurably. In fact, production has considerably exceeded retail sales, a fact of considerable concern to manufacturers.

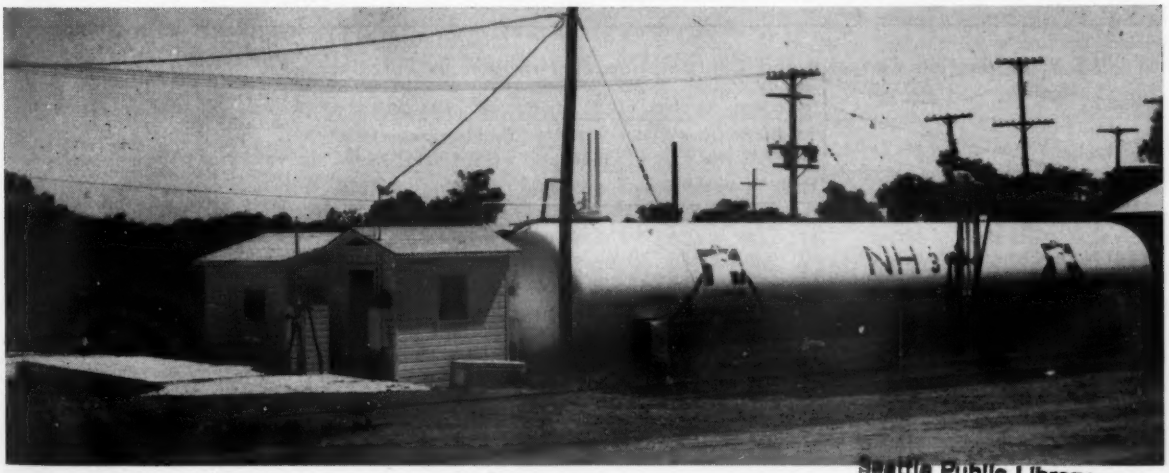
Surveys show some little variation in the amount of production from year to year. Even government reports differ, but this may be due often to difficulties in obtaining accurate figures.

Available Nitrogen

According to the September, 1955, report of the Commodity Stabilization Service of the U. S. Department of Agriculture, "It is currently estimated that the 1955-56 supply of nitrogen available for fertilizer use will approximate 2.35 million tons." (The estimated 1955-56 supply of nitrogen by type and class is shown in *Table 1.*)

The same report shows the production capacity and consumption as fertilizer by geographical region, as in *Table 2.* As the domestic production capacity on July 1, 1955, was 3,290,000 tons and the consumption as fertil-

"Storage for 60,000 gals. of AA proved to be about the minimum that a distributor could provide to permit an economically sound operation, although some firms have gotten by on half that volume, when it has been possible to fill farmer field tanks in advance of the application season."



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DEC 6 1955

Anhydrous Ammonia... New transportation methods are changing the supply situation

izer on June 30, 1955, was but 2 million tons, and but 2,756,206 tons for all purposes, it will be seen that already there is a substantial surplus product on the market.

Progress

Producers are furthering their progress by endeavoring to establish larger capacity at manufacturing points and by experimenting with new methods of transportation. They are constantly fighting for lower rail freight rates and endeavoring to get AA classified as a fertilizer instead of a chemical to force lower rates. They are studying transport truck service and, where feasible, resorting to water transportation.

Phillips Petroleum Co. has built a sea-going barge for ocean shipments to Puerto Rico, and Shell Oil Co. is shipping product by barge up the west coast from its Pittsburg, Calif., plant to Pasco, Wash. Other barges are operating on mid-continent rivers.

While distributors may look upon this as a headache for the manufacturer only, it will have important effects upon the retail market. On the favorable side it may bring down prices, but indirectly it is resulting in keener distributor competition, for with larger supply it means that more firms are able to establish themselves.

Among the answers to inquiries sent out this year is one from O. L. Garretson, vice president of Arrow Gas Corp., which takes exception to the viewpoint that L. P. gas dealers are in particularly favorable positions to handle anhydrous ammonia. This letter is quoted here so that readers may weigh the opinions advanced and assimilate some very valuable additional information pertaining to current operating conditions:

Advantages and Disadvantages

"It is true there are both advantages and disadvantages to LPG firms handling anhydrous ammonia, but in general, I do not feel the agricultural ammonia business is a more logical sideline for the L. P. gas in-

TABLE 1. NITROGEN: Estimated 1955-56 Fertilizer Supply, United States and Possessions

(In tons of 2,000 pounds nitrogen content)

Item	Ammonium Nitrate[2]	Ammonium Sulfate & Sulfate-nitrate	Urea	Other Solids[3]	Natural Organics	Compound Solutions[4]		Ammonia[5]		Totals
						For Mixing	Direct Application	For Mixing	Direct Application	
U. S. Production										
Synthetic	420,000	220,000	50,000	100,000	—	470,000	50,000	180,000	460,000	1,950,000
By-product	—	[6]185,000	—	—	—	—	—	2,000	—	187,000
Natural organics	—	—	—	—	30,000	—	—	—	—	30,000
Total	420,000	405,000	50,000	100,000	30,000	470,000	50,000	182,000	460,000	2,167,000
Exports[7]	15,000	110,000	5,000	20,000	1,000	40,000	—	7,000	—	198,000
Supply from domestic sources	405,000	295,000	45,000	80,000	29,000	430,000	50,000	175,000	460,000	1,969,000
Imports[7]	120,000	50,000	30,000	170,000	6,000	—	—	5,000	—	381,000
Net supply	525,000	345,000	75,000	250,000	35,000	430,000	50,000	180,000	460,000	2,350,000

[1] Based on present rates of production, imports and exports and trends in the trade.
[2] Includes mixtures with limestone.
[3] Ammonium phosphates, sodium nitrate, calcium nitrate, cyanamid and nitraphosphates.
[4] Includes ammonia-ammonium nitrate, ammonium nitrate and ammonia-urea solutions in water.
[5] Includes aqua ammonia.
[6] Includes by-product ammonium phosphate.
[7] Includes estimated nitrogen content of imported and exported mixed fertilizers and ammoniated superphosphate.

TABLE 2. Production Capacity and Consumption of Nitrogen as Fertilizer

(1,000 tons — 2,000 pounds each — of nitrogen content)

Region	Production capacity[1] as of July 1				Fertilizer consumption[2] year ended June 30	
	1954	1955	1956	1957	1953	1954
Eastern[3]	791	898	1,062	1,097	492	518
East North Central[4]	380	472	652	653	239	261
West North Central[5]	188	301	359	452	180	266
East South Central[6]	250	372	408	500	256	263
West South Central[7]	789	949	949	950	151	182
Western[8]	210	297	485	680	266	299
Territories[9]	1	1	1	35	53	58
Total United States	**2,609**	**3,290**	**3,916**	**4,367**	**1,637**	**1,847**
Eastern Canada[10]	139	162	204	290	29	30
Western Canada[11]	167	177	190	219	15	12
GRAND TOTAL	**2,915**	**3,629**	**4,310**	**4,876**	**1,681**	**1,889**

[1] Estimated total of synthetic, chemical by-product and natural organic nitrogen.
[2] U S. figures from data compiled by the Soil and Water Conservation Research Branch, Department of Agriculture; those for Canada from Dominion Bureau of Statistics.
[3] New England, Middle Atlantic and South Atlantic States.
[4] Ohio to Wisconsin inclusive.
[5] North Dakota and Minnesota to Kansas and Missouri inclusive.
[6] Kentucky and Alabama to Mississippi inclusive.
[7] Oklahoma, Arkansas, Louisiana and Texas.
[8] Montana and New Mexico to Washington and California inclusive.
[9] Alaska, Hawaii and Puerto Rico.
[10] Newfoundland to Ontario inclusive.
[11] Manitoba to British Columbia inclusive.

"There is no question of the permanent demand for a product that can double and treble the production of farm crops . . ."

Remember Last Year?

The December, 1954, issue of "Butane-Propane News" contained a comprehensive survey and review of the anhydrous ammonia industry as related to its storage and marketing by liquefied petroleum gas distributors. Those who keep back files of this magazine will do well to reread the issue named.—Editor.

dustry than it is for grain and seed dealers, farm implement dealers, gasoline jobbers, or other types of business serving rural accounts. We find there is almost no interchange of facilities or equipment between the two businesses and our past experience in handling LPG is of very little value from the standpoint of employe training.

Handling and Sales Training

"Shop facilities and farm implement experience would be of the most value from the standpoint of handling agricultural ammonia. Feed, seed, and bag fertilizer experience or an education or training in agronomy would be most valuable from a sales standpoint. Our anhydrous ammonia business has been profitable, but if anyone owns three companies, such as a farm implement business, a feed store, and L. P. gas business, we believe he would find it just as satisfactory to start the ammonia business as part of his implement store as to make it a part of the L. P. gas operation.

"At present and in the foreseeable future, ammonia will be very available and, in most areas, the business is highly competitive and has even gone through a period of serious loss to the operators in many areas during the 1955 season. Application methods are improving slightly. The major problem of the business is a material handling job and further improvements are possible in order to reduce investment, labor costs, and time in transferring ammonia through the various steps from the truck or rail side to the soil of the farm.

Fertilizer Field Expert

"Capital for expansion appears to be available on a basis comparable to the L. P. gas business. Most farmers are skeptical about taking the recommendations and ideas of an L. P. gas man regarding fertilizer, so we recommend every operator have at least one man who will be recognized and accepted as an expert in the fertilizer field.

"Credits can be a severe problem. For example, the ammonia dealer will probably be forced to handle some bag material, such as super phosphate, at very narrow margins which are typical of the bag fertilizer business, then the farmer who has been allowed to *ride* the dealer all summer for a $30 or $40 gas bill, may do the same thing with a $1000 fertilizer bill which was handled at no profit."

While major problems confront combination LPG-AA distributors, the majority opinion expressed by operators contacted is that the L. P. gas dealer has an edge on other business firms in starting an AA operation. As an Arkansas distributor reasons:

"All of our operation is tied in to the farmer operation and with all of our business—both LPG and AA—going through the same office and bookkeeping staff, it makes our costs about as economical as it is possible to keep them."

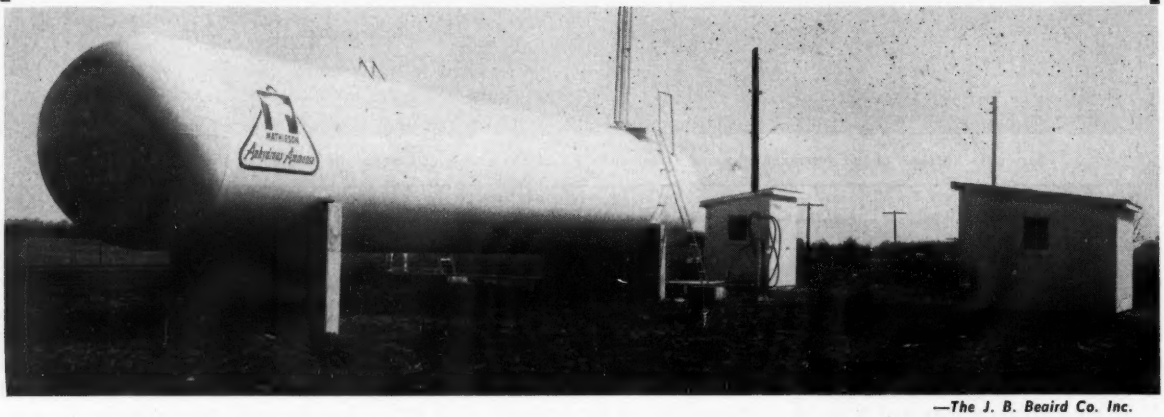
Without doubt the future of anhydrous ammonia as a fertilizer is huge, and it is equally certain that combination LPG-AA distributors have excellent opportunity to cash in on their pioneering efforts. And in spite of increasing competition there is still room for aggressive operators, well financed, to take on anhydrous ammonia as supplementary to their LPG business. As in other lines, those who establish constructive sales programs and whose resources are sufficient to bridge the quiet seasons, will attain the largest success.

There is no question of the permanent demand for a product that can double and treble the production of farm crops, but the distribution of the product in this area can be a complicated and sometimes an economically hazardous undertaking. ■

Thanks

Special acknowledgment for cooperation in the preparation of the material in this article is due Jack F. Criswell, executive vice president of Agricultural Ammonia Institute; K. W. Rugh and Phillips Petroleum Co.; O. L. Garretson, vice president of Arrow Gas Co., and individual operators who provided information upon their operations.—Editor.

What Equipment is Needed for AA Operations?



—*The J. B. Beaird Co. Inc.*

Bulk storage tanks for dealers range in size up to 30,000 gals., and must conform to one of several API or ASME codes. Storage pressure recommended by The Agricultural Ammonia Institute is 250 psig.

SPECIALLY designed equipment is required for handling anhydrous ammonia. Below we have compiled a list of such equipment and discussed briefly the functions of each piece.

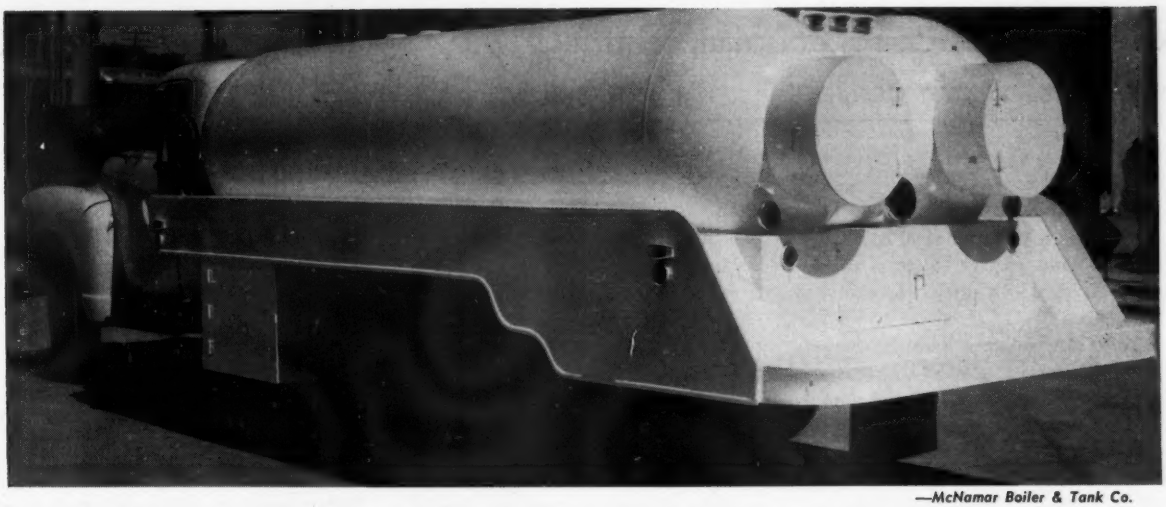
Bulk storage tanks. The storage tanks for anhydrous ammonia, like L.P. gas storage tanks, must be constructed in accordance with the requirements of certain acceptable codes. These vary some among the different states but in general may be in accordance with one or more of the following: The American Society of Mechanical Engineers (ASME) 1952 Code for unfired pressure vessels, the 1950 edition of their code, or the 1949 edition with certain reservations; the joint American Petroleum Institute-American Society of Mechanical Engineers (API-ASME) Code, 1943 and 1951 editions. The maximum working pressure to which these vessels must be designed or constructed may vary among states. The recommended standards for the storage and handling of AA, as promulgated by the Agricultural Ammonia Institute, is 250 psig. A common size for such vessels is 30,000 gal. but frequently operations by dealers are started with 6000-gal. tanks and similar units added as needed. The 100-and 150-lb cylinders, frequently used in small operations, are built to similar specifications, or to those of the Interstate Commerce Commission Specifications ICC-4, ICC-3A480, ICC-3AA480, ICC-4A480, ICC-3 and ICC-3A480X. These call for 265-lb working pressure when handled interstate.

Transport tanks. All transport truck tanks, delivery truck tanks, skid tanks, trailer and applicator tanks must be built to the same pressure standards as storage tanks. These will vary in size from 5000 gal. or more for transports down to 110 gal. for applicator tanks.

Applicator or tractor tanks. These supply tanks are generally equipped with a liquid outlet valve; safety relief valve; filler valve; pressure gauge; liquid level gauge and vapor return valve.

Applicator. Machines commonly used for applying AA are made up of a frame for mounting a high pressure, welded steel tank complete with the above listed fittings for the anhydrous ammonia; distributing pipe or hose line and soil shanks. The units are usually mounted on general-purpose cultivator tractors of 2-to-4-row equipment.

Metering equipment. The metering device must withstand pressures of 150 to 250 psi on the high pressure side, 0 to 125 psi on the low pressure side; it must be built strong but not too heavy, capable of handling 500 lb of AA per hour and up. The ammonia comes out of the tractor tank through the meter and is divided by means of orifices to the applicators. The most commonly used metering device for AA is a needle valve and pressure gauge before the orifices. A pressure regulating valve and pressure gauge



—McNamar Boiler & Tank Co.

All truck tanks must be built to the same storage standards as storage tanks.

before the orifices may also be used for metering AA. There are other methods, as well.

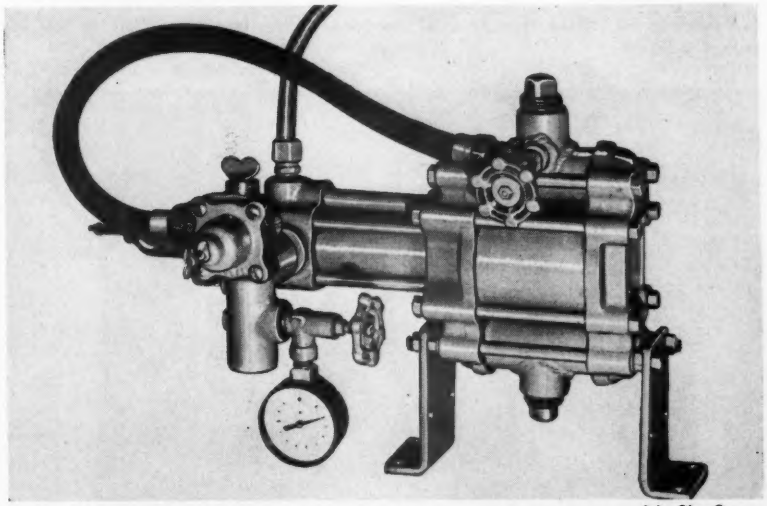
Compressors, pumps. Compressors may be of the reciprocating or rotary type, designed for 250 psi working pressure. Liquid pumps may be of piston, centrifugal or regenerative type, designed for 250 psi working pressure.

Gauges. Each AA container, except those filled by weight, must be equipped with a liquid level gauging device of approved design and capable of withstanding a working pressure of 250 psi. The fixed tube liquid gauge extends down into the storage or applicator tank to a point which represents the maximum filling level. This gauge merely tells whether or not the tank is filled to the permissible maximum capacity. To determine the amount of liquid in a storage or applicator tank a slip gauge, rotary gauge, float gauge or external glass column gauge may be used. They are quite similar to those used for L.P. gas service, except for the metal from which they are made. A pressure gauge on an applicator tank or storage tank is provided to indicate the pressure of the vapor above the liquid in the tank. On the applicator tank it serves as a guide to the operator in helping to determine how much AA is being injected into the soil. The speed of the tractor is the other major influencing factor.

Regulations — control equipment. For accurate measurement of anhy-

—Foreman Manufacturing Co.

Tank trailers such as this one are available in 500- and 1000-gal. sizes.



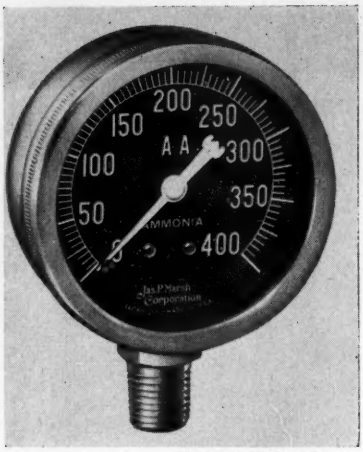
—John Blue Co.

Transfer pump is driven with a small amount of ammonia vapor, fills tanks at the rate of 20 gals. per minute.

AA Equipment... Control equipment must be made from iron or steel

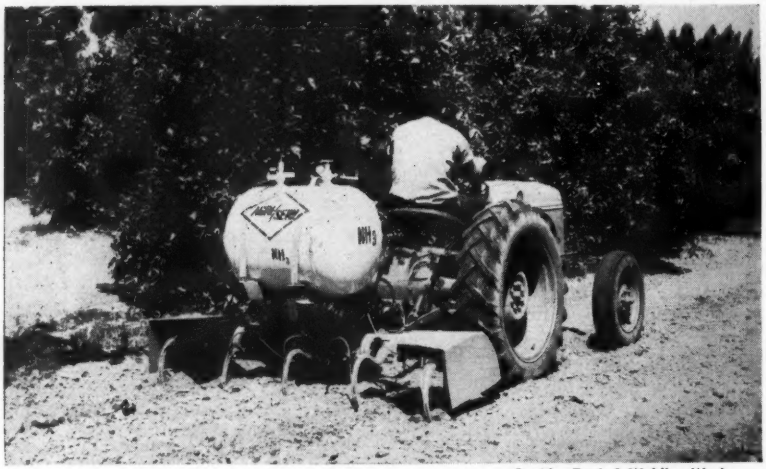
drous ammonia flow, its temperature and pressure should be controlled. Pressure can be controlled by a pressure reducing valve of steel construction designed for the range of conditions under which it will be required to operate.

Valves. All control equipment must be made of iron or steel and it must be specially designed and constructed for use with AA. The filler valve (double check) permits the transfer of liquid AA from storage tank to applicator tank. The vapor bleeder valve's function is to relieve the pressure in the applicator tank so that the higher pressure in the storage tank will start the liquid flowing. The relief valve permits the escape of gas when the pressure within a tank exceeds the predetermined temperature, and thereby prevents inside pressures from building up to a dangerous point. The service valve on an applicator tank is sometimes referred to as a liquid outage valve, or a shutoff valve. It is the valve through which the anhydrous ammonia passes in going from the tank to the metering device which controls the flow of ammonia into the ground. The function of the vapor return valve is to permit the return of vapor from the tank being filled to the supply tank. The excess flow check valve is installed as a safeguard in the event the rubber hose or vapor return line is ruptured or broken loose from the hose coupling. Although the above use of excess flow check valves is of first consideration to users of AA in making liquid transfers in the field, the valve is used in other ways, including its installation on the bottom of the dip tube of the service valve and on bulk storage tanks at any point where a liquid or vapor line leads from the tank.



—Marsh Instrument Co.

Pressure gauges are used on applicators, storage equipment, and processing equipment.



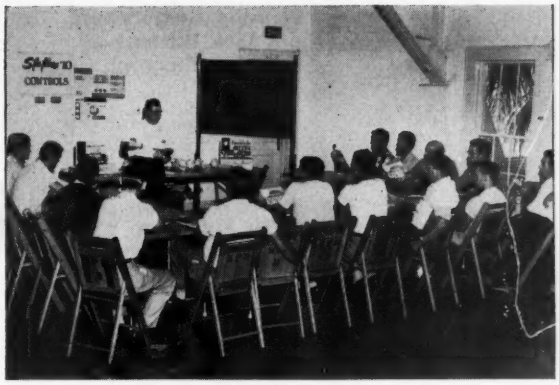
—Buehler Tank & Welding Works

Tanks such as this 110-gal. capacity model strapped to saddles feed the soil through hose line and soil shanks.

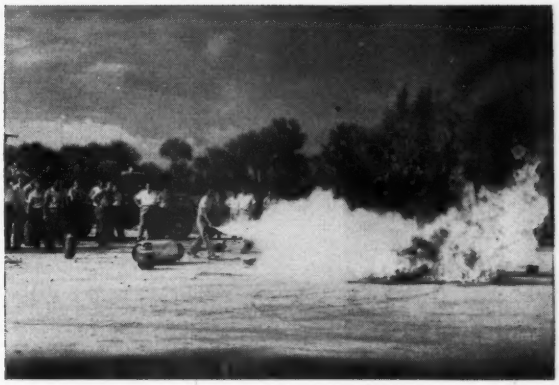
Hose and hose connections must be made of materials that are resistant to the action of anhydrous ammonia.

Pipe and fittings. All fittings, where subjected to container pressure, must be made specifically for use with AA and designed for a minimum working pressure of 250 psig. No cast iron bushings, plugs or pipe fittings are allowed. Neither can galvanized pipe be used. Only black steel or iron pipe of at least 800-lb bursting pressure (Schedule 40) is permitted, and then the pipe joints must be welded or joined by mean of welding type flanges. Screwed joints are permissible only with extra heavy (Schedule 80) pipe. Pipe joint compounds must be resistant to ammonia.

Hose. Hose and hose connections must be made of materials that are resistant to the action of anhydrous ammonia. Hose subject to container pressure must be designed for a minimum bursting pressure of 1250 psig, and those on the low pressure side of flow control valves must be designed for a minimum bursting pressure of 125 psig. ■



Instructor James Kelley representing a controls manufacturer, heads a group in automatic thermostat controls.



Every one of the attending servicemen had an opportunity to handle a fire extinguisher and put out a roaring blaze.

130 Servicemen Go Back to School in Green's Fuel Clinic

BPN field report

By Harry J. Miller

ON Sept. 19, 20, and 21 Green's Fuel of Florida played host to 130 servicemen and dealers who gathered in Sarasota's Municipal Auditorium to get the latest low-down on methods and materials for servicing LPG equipment.

Planned by Green's president, Kenneth H. Koach, who delivered the welcoming address to the men from Florida, North and South Carolina and Georgia, the clinic was spark-plugged by Francis H. Williams, Chief Engineer for Green's Fuel, on whom devolved the many details of organizing the affair and notifying Green's far-flung dealership.

The 30-year-old organization conducts these clinics on the principle that successful sales are only possible through carefully-planned and supervised factory training of field service personnel.

Courses included automatic controls, gas refrigeration, air conditioning, public relations, safety in handling the gas, and the ever-increasing role of LPG as fuel in cars, trucks, tractors and stationary engines. Under the supervision of the factory-trained engineers, classes, purposely limited to small groups, required each serviceman to participate in every phase of the training activities.

Interest was maintained on a high level, since the "students" came into direct contact with the actual equipment while being assisted by a factory specialist with the know-how to answer any question.

Chief Engineer Williams arranged the training so that instead of leaving to chance or the serviceman's fancy what he was to see and hear, each man was definitely scheduled to every station and was provided with proof of attendance there.

"For example," says Williams, "we had arranged with the local fire department to set a fire behind the auditorium so we could show the proper use of fire-fighting equipment.

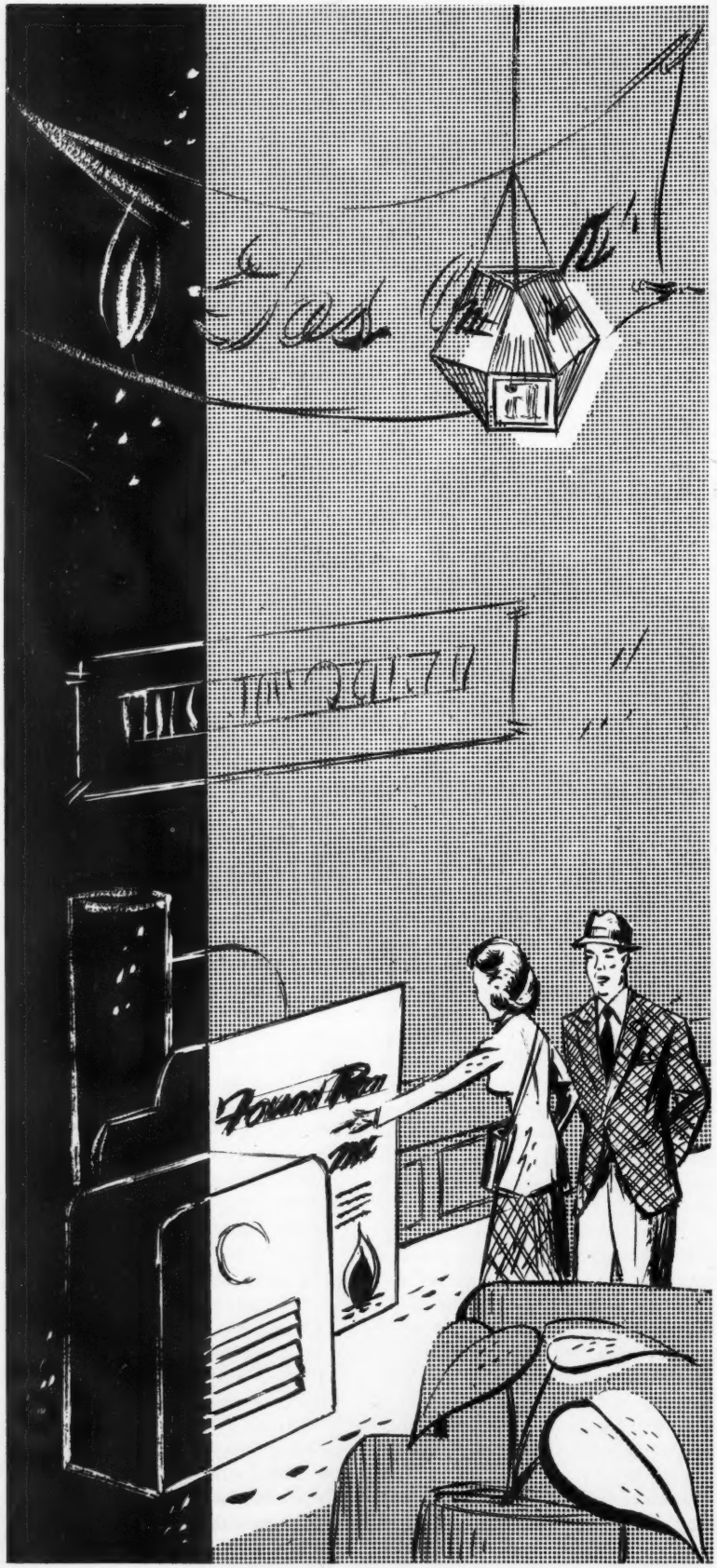
"We know that every LPG truck carries a fire extinguisher, but few truck drivers know much about their operation, and they need reminding.

"In my opinion every LPG man should have a fire-fighting demonstration at least twice a year. Maybe they won't get to use an extinguisher once in 10 years, but they should know how to use it efficiently if the need arises. And the only way to learn to shoot a gun is to shoot it yourself."

On the theory that the "boys must feel heat", a 200-pound LPG cylinder was laid on its side and hooked up with 7 or 8 ft. of copper tubing. Gasoline was poured on the ground, the valve on the tank opened wide, and the conflagration started. Each and every serviceman was required to start the fire and put it out. Instructor James M. Dudley of the Southeastern Safety Appliance Co. came from Atlanta Ga. to instruct in the art of fire-fighting. (This company stands ready to perform this service for any group, anytime.)

Says Williams: "We figure the servicemen who came to the clinic know 80% of their job. We plan for them to learn the other 20% here."

Slides shown by the Fisher Regulator Co., showed the negligible effect of an atomic explosion on LPG. Although most of the cylinders were torn from their moorings, none of them leaked, and opinion voiced at the Nevada demonstration was that LPG would be availble for emergency use within 30 minutes after the holocaust. ■



By John Gregory and Jack Wichert
Schmidt Lithograph Co.

Make

IT should be no news to the LPG dealer that most of his fellow dealers are riding a winning horse. Sales are going to continue to expand, and some of the dealers are going to earn a "bigger piece of pie" than others. The question he should ask himself is "Am I getting my share?"

In an eight-part series "How to Plan Successful Advertising" which ran from June through October the four foundations on which sound advertising is built, where to spend that advertising dollar, how to establish a budget, when to advertise, how to check the results, plan a campaign, sell to specialized interests, radio advertising, and the art of teaming up advertising were discussed. This article tells of the advantages of P.O.P. advertising, a very effective and probably one of the most inexpensive forms of advertising used.

In talking with dealers, we found they asked a variety of questions concerning P.O.P. and LPG. To simplify presentation, the balance of this article is written in a question and answer style. The questions are typical of those asked by the companies we contacted. The answers are based upon remarks made by successful P.O.P. users and the experiences of the writers' company in working with this important media.

•

Q. *What is P.O.P. advertising?*

A. Point-of-Purchase Advertising (called P.O.P.) is advertising encountered by potential customers at the point-of-sale. It is advertising that calls attention to your business and your merchandise. It includes such things as signs outside your store, window streamers, decals, motion displays, banners, wall and window signs, demonstration units, photographs used on the premises, hand painted signs, reprints of magazine newspaper ads, and many others.

P.O.P. Pay!

Q. *How can P.O.P. help me sell more gas?*

A. By helping you sell more gas-using equipment. Not only will you sell more gas but you will receive increased profits from the sale of the equipment and appliances.

Q. *How does P.O.P. do this?*

A. Point-of-sale advertising does a number of things. It attracts attention to your store and merchandise. It creates interest in what gas using equipment will do for the purchaser. It presents sales points for your brands over those of competitors. It acts as a silent and ever-ready salesman.

Q. *Is P.O.P. effective in increasing sales?*

A. Each year more and more manufacturers are increasing their expenditures for P.O.P. materials. Look at the drug, grocery, liquor and department stores you visit. Note how they are filled with various kinds of advertising which speak to the customer at the time he or she is ready to make a purchase.

Ask any of these retailers why they use P.O.P. and they will tell you it is because they produce extra sales and profits.

Q. *But will P.O.P. help me sell LPG using equipment and appliances?*

A. Definitely yes. Go see the leading dealers in your area and note the P.O.P. they are using. Furthermore, the best proof of P.O.P.'s value is the fact that LPG firms which use P.O.P. effectively are expanding their activities in this area. As one dealer told us, "The more P.O.P. I use, the more I sell!"

Q. *If this is so, why aren't more LPG dealers using P.O.P.?*

A. There are several reasons for this, some of the more important ones being:

(1) Many dealers do not have an adequate show room for appliances and equipment. Fortunately, this deficiency is rapidly being corrected.

(2) No one person is responsible for appliance sales. Because many dealers do not have one or more persons specifically assigned to selling on the floor full time, no one is really interested in doing a job with P.O.P. Too often the cashier or a mechanic doubles as the salesman and their other duties leave no time for an effective point-of-sales program.

(3) Many dealers are not aware of the value of P.O.P. Even some manufacturers of gas-using equipment do not realize what such a program can do. If these organizations would only analyze what LPG's competitors—natural gas and electric—are doing with P.O.P., there would be an immediate increase in the use of this medium.

(4) Some dealers are unaware of the availability of the materials. Unfortunately, not all of the LPG-appliance manufacturers who provide P.O.P. materials have done a really effective job in merchandising their advertising to their outlets.

(5) LPG dealers have not demanded better conceived and executed pieces of P.O.P. advertising from their equipment suppliers.

Q. *What is a good example of P.O.P. used by an LPG dealer?*

A. Numerous examples could be cited but let's consider just two. One manufacturer of wall heaters built a wooden display that is attached to a heater. The display demonstrates how the heater fits flush with the wall. In addition, it holds a picture of the display in an attractive living room. This helps the customer visualize the unit in his home. Along the side of the heater are printed six important selling features of the unit. In addition, the display has a wooden pocket which holds and dispenses leaflets telling the complete story of the heater.

Another good example is the display built by one dealer featuring various refrigerators. All of the units are assembled under a sign which reads, "Refrigerator Department." In the center of the department is one appliance which holds a sign listing the unique advantages of the refrigerator's ice making unit. On either end of the department are full-size cardboard cutouts of the company's television stars standing alongside of various models.

Q. *How about an example of where an LPG dealer missed the boat?*

A. This is not hard to do. The other day I watched a woman in an LPG dealer's showroom. The only sales person was busy when she entered. She was attracted by a display of a new table-top stove with a separate oven. Since there was no salesman or Point-of-Purchase advertising available to tell her about the stove, she quickly lost interest and left with her husband who had finished paying his bill.

These comments are not intended to imply that P.O.P. advertising would have done the work of a salesman. However, we will probably all agree that an attractive sign or two, a picture of some of the wonderful things the stove would prepare for her table, a list of special features and a folder would have done much to "sell" the lady on that dealer's particular unit.

Q. *True, but what if I don't have much foot traffic in my store?*

A. P.O.P. can help you build it. It has been proven that an attractive sign out front, or a well-done window display will stop potential customers. Furthermore, even though such advertising does not produce an immediate customer reaction, it does make them aware of your operation and they frequently think of you when they are in the market for something new. For example, no one really plans on replacing a water heater until the bottom falls out of the old one. The dealer who has done a thorough job of telling his story via radio, newspaper, direct mail, and P.O.P. to the customer stands the best chance to get the business. Furthermore, he is the dealer customers

talk about when other prospective customers ask where should they buy their gas and appliances.

Q. *If P.O.P. advertising is so effective, why should I need anything else?*

A. A good question. Research has proven that point-of-purchase has actually "made the sale." However, just as you need a well-rounded group of personnel in your organization for greatest efficiency, so also do you need a well-rounded advertising campaign. All of the money you spend on advertising plus the large amounts spent by equipment and appliance manufacturers is directed at pre-selling the customer on your merchandise. Doesn't it seem like good sense to capitalize on those expenditures at the *one* point where the customer is ready and willing to part with his money?

Q. *Then you think I should tie my P.O.P. in with the manufacturer's advertising?*

A. Definitely. Why not feature the appliance he does? If he runs a spread in *Life* on stoves—push stoves and place a copy of his ad alongside your units. If it's air conditioners, go after them.

Furthermore, tie your P.O.P. in with the rest of your ad program. If you run a newspaper ad on a refrigerator, feature the same unit in your direct mail, in your windows and on the selling floor. Be sure to surround the appliance with P.O.P. materials that tell the story for you.

Q. *Do you think P.O.P. can help sell major appliances?*

A. Look at it this way. A couple comes into your store. They are excellent prospects for additional appliances, or perhaps converting their tractor to LPG, because they are already doing business with you. The wife sees a new clothes dryer. Your P.O.P. advertising reminds her of the backache connected with lugging clothing to and from the line. An attractive card or banner shows her enjoying life with the children while the machine does the work. She is interested and would like to buy. Fortunately, because of your easy credit—low or down payment program—she is able to buy the dryer a little at a time. There is no exact way to measure the effect of the P.O.P. advertising. All we know is that dealers who use it effectively sell a lot of appliances!

Q. *How much does P.O.P. cost me?*

A. To begin with, P.O.P. is probably your most inexpensive form of advertising. Much of the material is provided to you free—your only expense is your time since the space costs you nothing. When the manufacturer does make a charge, it is usually on a "share-the-cost" basis. Frequently this is done, not because he wants you to pay part of his costs, but because he feels you will make better use of the materials if you have something invested in them.

But the manufacturer is not your only source of inexpensive P.O.P. materials. You can clip ads from newspapers and mount them near your equipment. Photos of actual installations in your area serve a double purpose of illustrating use and giving endorsement to your story. If you want to glamorize your program, the use of crepe paper and a few hand lettered signs will do wonders for an otherwise "dead" display.

Q. *Why are manufacturers willing to provide me with free P.O.P.?*

A. First, because they know this advertising will sell appliances for you and them. Second, they realize it is the most inexpensive advertising they can buy.

Q. *When should I start my own P.O.P. program?*

A. There never was a better time than *NOW!* Furthermore, if you already are doing some P.O.P. advertising, now is the time to review your program and to improve it for the coming year. Remember, P.O.P. is most effective when done on a long range basis. Merely to wait until some manufacturer mails you a display piece, or has his salesman drop in with one, before you put something up, is to lessen your chances of sharing in today's expanding market.

Q. *What should I do to get my program under way?*

A. (1) Resolve to increase your sales through the effective use of P.O.P. materials.

(2) Acquaint yourself with the materials available from your various suppliers.

(3) Decide what specific objectives you will seek through the use of P.O.P. Some of the objectives of an aggressive LPG dealer should include:

a. Calling attention to the place of business.
b. Calling attention to particular products for sale.
c. Demonstrate particular products.
d. Promote the sale of related items.
e. Introduce a new product or model.
f. Feature uses.
g. Show price.
h. Give product seasonal appeal.
i. Create a department.
j. Distribute literature.
k. Stimulate interest in a contest.
l. Show a line.
m. Feature combination offers.
n. Advertise institutionally.
o. Give a quality product a quality background.

(4) Call attention to your place of business with an outdoor sign.

(5) Call attention to particular products through effective windows.

(6) Arrange your display room into departments, if possible.

(7) Appoint some one individual to be responsible for your P.O.P. program.

(8) Plan a coordinated P.O.P. program in line with your other advertising. (And that of manufacturers, too, if you know this.)

(9) Establish a budget to cover the small amount of P.O.P. expenses you will encounter.

(10) Start this month with at least one new P.O.P. display.

(11) Plan to change your P.O.P. on a periodic basis.

(12) Keep records of the effect of various P.O.P. programs and resulting sales. This information will prove valuable in planning future programs.

One final word. As you work on your point-of-sale program you will find it will have a dual effect on sales. Not only will it motivate your customers to additional purchases, but it will act as a real stimulant to your own sales personnel. As a result, when the anticipated 1955 and '56 sales of LPG expand, you will be one of the firms who will *get your share.* ■

Personalize Your Firm With An Animated Trademark

"Tommy Lin Gas" ties all advertising and promotional activities together and makes the public remember this Evansville, Ind., dealer.

A QUAINT little fellow called "Tommy Lin-Gas" is well known throughout the 100-mile sales radius that extends from Evansville, Ind. He talks daily of the selling points of gas appliances and L. P. gas over the airwaves, through the daily newspapers, on outdoor posters, on neon signs, and through direct mail. He teams up the advertising channels for greater sales volume and advertising integration for Lin-Gas Inc., Evansville.

Lin-Gas started in business seven years ago. Charles W. Link, progressive manager and secretary-treasurer of the firm explains how Tommy Lin-Gas got his start.

"We had Tommy Lin-Gas designed several years ago, and named him after my youngest son. We felt it would serve to coordinate our advertising message through every medium giving more forceful buying rememberance on the part of the customer. He appears in every portion of our consistent advertising program, and we have more than doubled our business volume during the past five years!

Radio

"We use radio constantly with commercial announcements introduced by Tommy Lin-Gas' recorded voice, spot announcements over a local Evansville station, and a five-day-a-week program of popular western music over another station. Our program is a silver-dollar giveaway. Listeners write in giving name, address and phone number. The Western star, a great favorite in the local area, phones the person, asking some question. The correct answer gets a cash award, *which is picked up by the person at the store.*

"This gives us additional leads, and it gives us more customer traffic into our appliance display store. In all of our advertising we strive for inquiries, response and leads.

"For example," continued Link, "we use newspaper ads also.

"We use direct mail often, using a major portion of the material provided by the manufacturers. For the most part, unless you order an unusually large quantity, this material is excellent and it is free for the asking. Too many dealers do not know of this material, and of the many many other sales materials provided by the manufacturer. Also, many times, cooperative advertising gives you far more advertising than you could do on your own and the sales results are very gratifying.

Mailing List

"We use our own mailing list, and plan to put Tommy Lin-Gas on our direct mail for a more personalized mailing, I do think much of the manufacturer's selling aids are fine and

BPN exclusive

Hallmarks of a successful operation are smartly maintained facilities such as the Evansville plant, shown above, and the bottle filling shop (below). Progressive business methods have helped Lin-Gas grow to the point where today it operates a branch in Henderson, Ky., and services some 30 dealers.

should be used frequently for larger appliance sales.

"In an effort to get our sales message throughout our area, regardless of where the customer may be, we try to complement our 'inside' advertising with outdoor advertising. We use a number of outdoor posters, smaller ones, throughout our sales area. We have attractive neon signs (with Tommy Lin-Gas) available for our thirty dealers in this section.

Consistent Advertising

"We've found that a regular, consistent advertising plan gives more direct sales results. We set up our advertising budget at the first of the year allotting about 2% of the past year's total gross sales. Then, in addition to this, we set aside another amount of cash for a small advertising reserve. We don't use it unless something exceptionally good and timely comes up. This gives the flexibility essential for advance advertising planning."

This advertising allotment covers the cost for other types of advertising also. Lin-Gas has participated in several of the local home-shows. Calendars are given away each year, which have proved extremely popular with local women because they have receipes on them 'designed for gas cooking'.

One of the most successful promotions is the cooking demonstrations which are held regularly. The corporation's own personnel organize the demonstrations. A salesman dons a red apron and a chef's hat and proceeds to demonstrate the ease and convenience of cooking with gas. The women are impressed. They know he is a salesman, not a cook. If he can do it, they know they can too.

Good Merchandising

Good merchandising methods opened the branch service and appliance sales branch in Henderson, Ky. on Oct. 1, 1954. Hundreds of local women came to the store to register for the free gas range. Carnations were given away to each woman. More than 400 women attended the cooking demonstration where a store salesman cooked a meal with gas.

Today's Lin-Gas consists of the main office in Evansville,; the branch office in Henderson, and 30 dealers in the sales area. The plant, has eight pieces of rolling stock, and 48,000-gal. of storage.

Mr. Link says, "the purpose of all advertising is to convey a sales message. The messages are given continuity for teamwork selling with our emblem Tommy Lin-Gas. It attracts attention. The best sales message in the world is of little value unless attention is created in the audience. Advertising paves the way for our two outside salesmen and for our appliance stores sales personnel." ■

To our BPN readers:

Watch for the special January

"WHAT'S NEW?"

issue of BUTANE-PROPANE *News*

● OUT DECEMBER 26, 1955

IN it you'll get a roundup of the outstanding and significant New Products developed for the LPG industry in 1955 — and others that will become available early in 1956.

New Products to Increase Your Profits!

Products for resale — with new conveniences and appeal for customers . . . products for your own use . . . labor-saving, cost-cutting, profit-building items to stimulate your business and profits in '56.

What better way to start the New Year than with a panoramic view of the important new things available to you in your industry?

Descriptions will be kept brief, to get as many outstanding products as possible into this "What's New?" parade. Each item will be numbered — and you'll be able to get further information on any that interest you by using the reply cards you'll find bound into the magazine.

Don't miss a page of this important special issue — for any page of it can mean hundreds of dollars to you!

Other Special Issues Coming in 1956

MAY . . LPG Convention Edition
A "convention in print," discussing and answering the major industry problems of dealers, large and small.

JULY . . All-Year Air Conditioning Issue
How to sell, install, and service modern equipment for winter heating and summer cooling.

SEPT. . . Transportation Issue
The annual discussion of LPG transport and delivery vehicles — new designs, costs, maintenance, obsolescence and replacement, routing and scheduling, communications, etc.

• If you are not now a subscriber to B-P News you can make SURE of your copy of these big issues by subscribing TODAY. Use the coupon.

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NAME_____ TITLE_____

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New Products and Trade Literature

To secure further information on products or new publications, fill out the coupon and mail, indicating by number the information desired.

1. A.A. Applicator

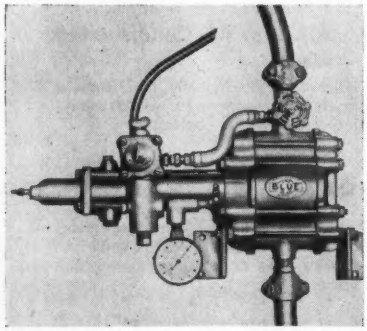
A recently developed design embodying a new application of weight transfer has enabled Pollard Manufacturing Co. to develop its anhydrous ammonia applicator, the Nitrogen Prince.

The new applicator has only two wearing surfaces, which makes for low upkeep and fast, power-saving operation. In addition, it has the added feature of adjustable ground wheel spacing as well as adjustable knife spacing.

Standard on this machine are 1¼-in. double-coil spring shanks, fast ball hitch coupling, and special alloyed and hardened knives.

Pollard Manufacturing Co.

2. Vapor Transfer Pump



The new John Blue Co. vapor transfer pump compressor draws gas out of the fuel or tractor tank being filled and forces it into the field tank from which liquid is being withdrawn.

To start and operate the pump requires only the opening of a needle valve. The turning of a thumb screw on the regulator determines the speed and efficiency of the pump by controlling the amount of gas entering the gas motor. After one adjustment, the thumb screw may be locked in position and left permanently.

Power for operation of the pump is extracted from a small quantity of L.P. gas which is expanded through the gas motor and discharged to the atmosphere.

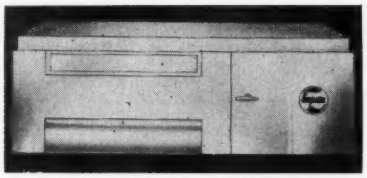
According to the manufacturer the rate of delivery through this pump is 150 to 200% faster than by the ordinary pressure bleeding method, and it saves 90 to 95% of the gas normally lost in bleeding transfers.

Rate of transfer may be as high as 19.5 gal. per minute, as determined by the motor inlet pressure on the pump and the type liquid line used in transfer.

Gas motor operating pressure is 70 lb per sq in. maximum and 30 lb per sq in. minimum. Maximum operating speed is 500 strokes per minute. The pump weighs 27 lb.

John Blue Co.

3. Stow-away Furnace



Empire Stove Co. has announced the addition to its line of a new low-cost central heating gas furnace and a new horizontal or stow-away gas furnace.

The addition of these two units rounds out Empire's line of unvented circulator heaters, wall recessed heaters, floor furnaces and central heating units .

Empire Stove Co.

4. Rotary Pump

The Superior LPG rotary pump is designed and engineered for simplicity, to eliminate metal-to-metal wear or adjustments, and to give a positive mechanical seal. The pump is capable of high volume at pressures up to 300 psi.

Carbon vanes are the only surface contacts. They are self lubricating, self-adjusting for wear and are pressure loaded from the discharge pressure of the pump.

It is stated by the manufacturer that the pump will not vapor lock or flash, and that it permits pumping butane against propane without bleeding off the higher pressures.

Superior Industries Inc.

5. Bottle-filling Adapter

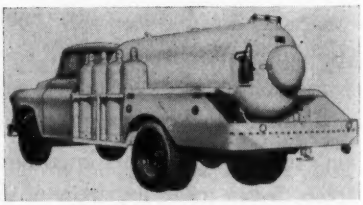
L. P. gas operators soliciting lift truck bottle filling business will be interested in the convenience and safety afforded by the new Rego No. 7145 adapter.

This new adapter has a female POL inlet connection for attachment to the outlet of the L. P. gas operator's charging hose. The 7145 adapter outlet is 1¼-in. female Acme for attachment to that portion of the Rego 7141 safety check connector which is permanently affixed to the lift truck cylinder valve.

The No. 7145 adapter has an integral safety check, which, it is claimed, automatically insures make-up with the lift truck cylinder valve before gas can be transferred past the adapter. Gas loss is said to be held to the absolute minimum. Further, it is not necessary to shut off the charging hose valve—a time-saving advantage.

The Bastian-Blessing Co.

6. Bulk and Bottle Truck



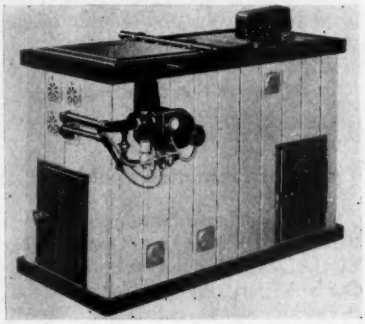
A new idea in butane-propane truck tanks has been announced by Master Tank & Welding—a truck that combines facilities for both bulk and bottle delivery. The new truck, another Master "Time Saver," is designed to answer the needs of LPG dealers who have customers of both kinds—those who own their own tanks and those who use bottles. The unit illustrated has a bulk tank with

a capacity of 900 gal. and carries four bottles on each side.

The new truck includes all the features of the Master twin barrel "Time Saver." Plumbing pump and all accessories are built as one unit, so that no plumbing is required to change from one truck to another. All working parts of the tank are mounted as a single unit on the platform at the rear of the tank. In addition to the time saving features in quicker delivery and changing of trucks, there is less maintenance, due to lack of vibration. Rigid pipe is used around the pump connections because there is no flex or strain. It is not necessary to change the exhaust system with the pump because there are no connections near the muffler.

Master Tank & Welding

7. Commercial Incinerator



Three new commercial units have been added to Incinor's full line of domestic incinerators, made by Bowser, Inc.

The new incinerator uses an unusual burning principle to attain smokeless and odorless operation. This is accomplished by means of a high-temperature secondary combustion chamber. Controlled air is drawn in by venturi action to attain accelerated combustion, which produces very high temperatures, completely burns combustible gases, and eliminates odors. The design also allows fly ash to settle in the chamber.

New models have been installed in factories, restaurants, schools, hospitals, bakeries and apartment houses.

Bowser, Inc.

8. Cylinder Valve

The Fisher Series B100 cylinder valve with integral safety relief valve utilizes resilient diaphragm as sealing means, employing a positive metal-to-metal stop and eliminating the need for litharge and glycerin or other thread sealing compounds.

The stem is mechanically joined to the seat disc holder to insure positive opening and closing of the valve. The safety relief device gives a relief area of .118 sq in.

The flow capacity is 765 cfm air at 480 psi flowing pressure, which is adequate for ICC containers of 500 lb water capacity. A high lift feature permits maximum filling and discharge capacity.

Fisher Governor Co.

9. Storage Heater

A new under-the-counter automatic storage gas water heater, specifically designed to provide large quantities of hot water up to 180° F from an installation where headroom is limited is now marketed by Ruud Manufacturing Co.

The new Ruud Sanimaster MS 20-50 has American Gas Association Laboratories approval on its 60,000-Btu input per hour on all gases. AGA has approved the gas appliance in two use classifications. As a free-standing automatic storage gas water heater, and as a circulating tank heater.

The 16-gal. storage tank is of solid Monel. In addition to being most suitable for use in gas stations, barber and beauty shops, the new Sanimaster is said to be ideal for commercial coffee making. It will fit under a food service counter. Height from floor to heater top is 32 in., width is 22½ in., and front to back over connections is 28¼ in.

Another anticipated use for the new Sanimaster is with installations of commercial dishwashing machines. The MS 20-50 will take primary hot water at 120° and boost its temperature to 180°. The water heater can be installed with a return circulating line which is said to insure instant 180° sanitizing rinse at the dishwasher. Another excellent application is in the dairy where high-temperature water is needed to sanitize milk cans and related equipment.

When used with an auxiliary storage tank, the Sanimaster either in single or multiple installation, will provide adequate hot water service for motels and apartment buildings.

This gas appliance has a hand-hole cleanout for removal of precipitated mineral deposits, an ASME-rated relief valve, and a 50 gal. per hour recovery rating.

Ruud Manufacturing Co.

10. Spray-fill Adapter

The principle of spray filling into domestic tanks with a spray-fill adapter that allows a tank to be filled to capacity without a vapor return line, saving time and maintenance costs, has been introduced by Black, Sivalls & Bryson Inc.

The equipment used to effect spray

For notices of more new products and trade publications turn to page 146 of the Power Section.

BPN

READERS' SERVICE COUPON

Just fill in this coupon for Products information and copies of new publications, and mail to

BUTANE-PROPANE NEWS, 198 S. Alvarado St., Los Angeles 57, Calif.

12/55 Fill in numbers of items in which you are interested.

No. ..... No. ..... No. ..... No. .....

No. ..... No. ..... No. ..... No. .....

NAME AND TITLE.....

FIRM'S NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

filling does not interfere with the normal use of the fill connection for liquid withdrawal for tank evacuation or auxiliary liquid take off. It is simply an adapter placed in the liquid piping.

In spray filling, liquid propane is charged into the vapor region of the tank in spray form instead of being submerged in the liquid portion, thereby cooling and condensing the vapor in the top of the tank.

Black, Sivalls & Bryson Inc.

11. LPG Fuel Systems

Underwriter-approved LPG fuel systems are offered as factory installed equipment on all models of Towmotor fork lift trucks and industrial tractors except the model LT-35. Fuel equipment consists of quick changeable ICC type fuel tank, self-sealing quick-connect fuel hose, filter, Marvel-Schebler two-stage regulator operating on liquid, and updraft carburetor.

Double protection against fuel leaks is provided by an electric fuel shut-off valve interconnected with ignition system and a vacuum-operated interrupter switch, which closes the system when the engine dies. Circular SP-21 describes the fuel system and lists the advantages of L. P. gas as fuel for industrial trucks.

Towmotor Corp.

12. 30-inch Gas Range

Simplicty is combined with beauty in Model M614 gas range of Perfection Industries, division of Hupp Corp.

This 30 - inch range, which is designed for flush-to-wall installation, has a tall splasher back which features white titanium porcelain enamel finish highlighted with a clear anodized aluminum top cap and trim strip. The lamp and easy-to-read manual "minute minder" point up the styling of this range.

The two giant and two standard Harper Onica top burners have automatic lighting with built-in filters.

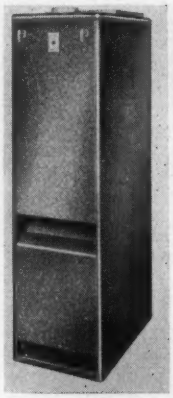
Quantity baking is possible in the extra-large oven, with its automatic heat control. The super oven has sturdy, non-tilt aluminized racks with safety stops, rounded corners and black porcelain lining for easy cleaning, and a metal oven seal at the door closure.

The drop-door Lo-Broiler has a plain door panel and roll-out drawer. The special smokeless grid and pan are finished in black porcelain enamel. There is a choice of four broiling heights.

The M-614 has universal burners and orifices which are adjustable to any gas.

Perfection Industries

13. Winter Air Conditioner



A new, more compact counterflow type winter air conditioner, specifically designed for gas firing, has been announced by the air conditioning division of American Radiator & Standard Sanitary Corp.

Ready for immediate delivery, the unit is available in 75,000, 100,000, and 125,000 Btu input ratings. Approved by the American Gas Association for 1-in. clearance installation at sides, zero clearance at rear, it can be safely operated on combustible flooring if optional sub-base is used.

American Radiator & Standard Sanitary Corp.

Trade Literature

14. Air Compressor Catalog

Brunner Manufacturing Co. has announced the publication of its catalog No. 36, a comprehensive presentation of the ¼- through 20-hp line of Brunner air compressors.

The 44 - page book, which is designed as a text and guide for those interested in air compressors, includes a detailed engineering section, featuring comprehensive selection information, and tables of computations that used properly, will insure the correct installation for each job.

In addition to the engineering section, the Brunner catalog contains descriptions, specifications, dimensions, engineering drawings and representative photographs of the complete line of Brunner single and two-stage outfits, both horizontal and vertical; single and two-stage compressors, base-mounted power plants and gas-engine driven outfits.

Other sections include information on continuous operating outfits.

Brunner Manufacturing Co.

15. Regulator Bulletin

A completely revised 20-page bulletin on "Rockwell Service Regulators" (Bulletin No. 1026) has been issued by Rockwell Manufacturing Co.

New features of the revised bulletin include:

1. Four pages of cutaway-illustrated description of improved Rockwell "173" regular regulators and new "173" high-pressure model — both with new 360° swivel connection assembly and side drain top covers.

2. Photo-illustrated descriptions of four new Rockwell regulator products — an improved "107" regulator with mercury seal, "107" with deadweight safety valve, "173" meter bar regulator and new Rockwell "118" farm tap regulator.

3. Four full-page rate-of-flow graphs illustrating mathematically the determination of maximum outlet pressure build-up and amount of gas relieved to atmosphere by Rockwell "extra safety" devices in case of complete failure of a service regulator.

Rockwell Manufacturing

16. Sales Promotion Booklet

A new sales promotion booklet entitled "For Cooking, Gas Has No EQUAL!" has been announced by Beals Advertising Co. Containing 16 pages and designed to fit in a No. 10 envelope, this promotion booklet is the result of cooperation of various range manufacturers, Harper-Wyman Co., AGA, Robertshaw-Fulton Controls and others in the development of a helpful and attractive selling tool.

A particular objective in planning and writing the booklet is to provide effective information to combat electrical merchandising.

A companion leaflet, designed to use as a stuffer with invoices and similar mailing, highlights the same information.

Beals Advertising Co.

17. Furnace and Torch Data

A new 11-page catalog has been issued by Mutual Liquid Gas Equipment Co. describing its industrial furnaces and torches.

Plumber, sheet metal, and heavy-duty furnaces are described and illustrated as are the company's lines of blow torches, portable heaters, weed burners, and liquid vaporizer burners. In addition, the catalog describes new developments in Mutual line.

Mutual Liquid Gas Equipment Co.

...thanks

Christmas is a time when we count our blessings and reiterate our thanks to you for helping us attain our best year.

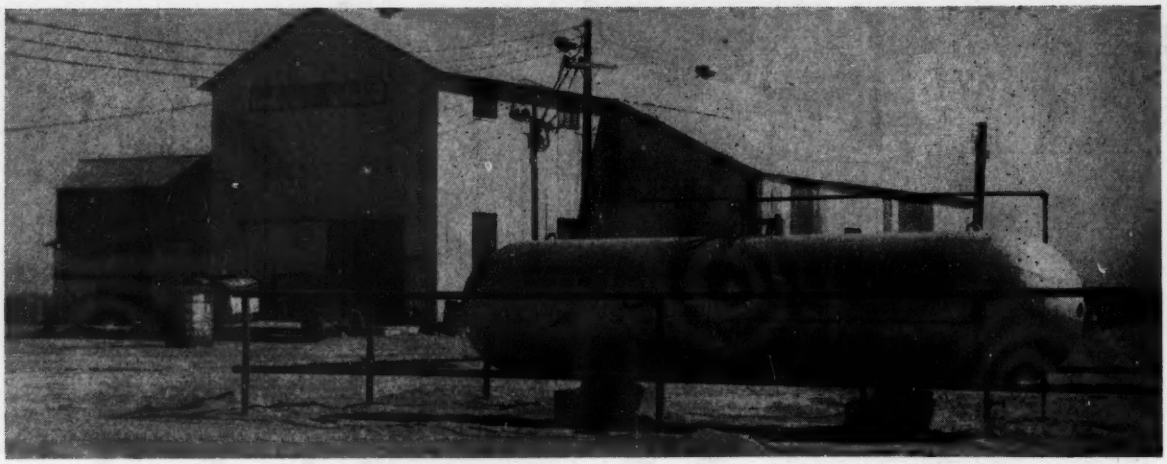
To you we send the Season's Greetings and best wishes for your future success and happiness. We look forward to a continuance of cordial relations with all our old friends and to the gaining of new friends during 1956.

Sid Richardson
GASOLINE CO.

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

REGIONAL REPRESENTATIVES

H. M. JONES 5123 NO. NEW JERSEY INDIANAPOLIS, INDIANA	MARVIN L. DOSS 3310 SYCAMORE MIDLAND, TEXAS	H. L. SCHMIDLEY 885 ST. PAUL AVE. ST. PAUL, MINNESOTA	WILLIAM T. CARL 3105 DEWEY OMAHA, NEBRASKA



Old River Gin is near a natural gas supply, but the seasonal use makes it more economical to use propane.

Demand for LPG For Cotton Drying Booms With Growing Use of Mechanized Pickers

By Carl Abell
Editor

THE rapid expansion in the use of mechanical cotton pickers makes the use of controlled heat increasingly necessary in the ginning of cotton. Each year more ways are found in which heat can be profitably employed in preparing the seed cotton for the ginning process. More heat requires more fuel—a fact of considerable significance to all LPG dealers in the nation's cotton producing areas.

The mechanical picker has proved to be particularly advantageous to the grower in areas where adequate labor is often not available. Also, the cost of mechanical compared with hand picking may result in a 70 to 80% saving. A substantial part of this saving, however, may be lost if the gin is not properly equipped with cleaning and heating equipment required to remove the additional amount of trash and to dry the cotton sufficiently to attain the highest possible grade.

Since the advent of the mechanical picker additional cleaning equipment has been installed and in some cases it has been necessary to provide an additional amount of heated air which may be applied to one or two driers as well as the headers.

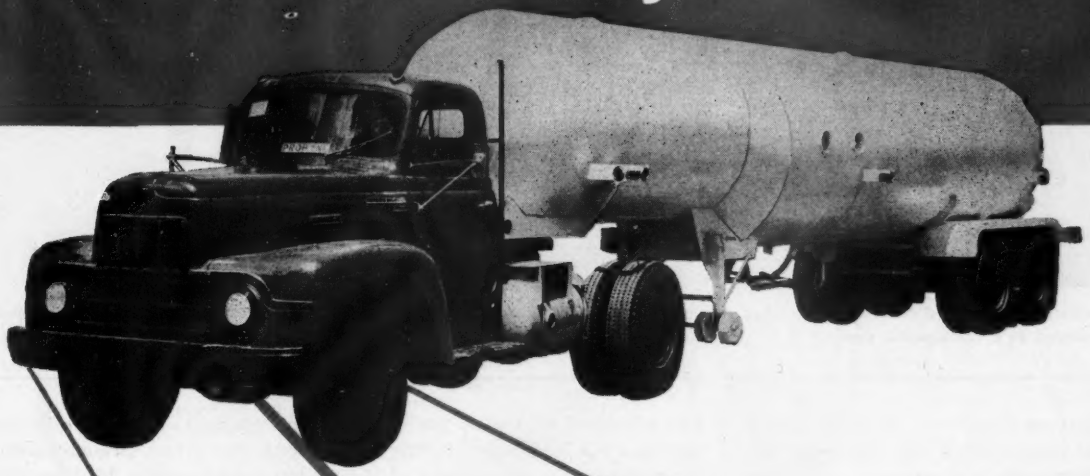
Growers using mechanical pickers pay less attention to the moisture content of the picked cotton as well as the amount of contained trash. They may operate mechanical pickers around the clock thereby getting more cotton out of the field at a lower cost per bale.

A large amount of dried leaves, shattered cotton bolls and other field trash comes into the hopper with the cotton as the spindles take it off the plant. The picking spindle of some machines must also be kept wet in order to pull the cotton out of the bolls and this moisture transfers to the cotton lint. This moist condition permits field dust to adhere to the cotton fibers so the machine-picked cotton is inclined to look somewhat dingy in comparison with the lustrous white of the cleaner hand-picked cotton.

As the result of these changed conditions in picking it has been necessary to completely revise and supplement the equipment used in cleaning and drying the cotton preparatory to ginning. A constant struggle has been made to bring the machine-picked cotton through the gin in the best possible and cleanest condition so that it will come as close as possible to meeting the grade which the same cotton would attain under the old hand-picking methods. With adequate cleaning equipment and a suitable automatically controlled air heater installed at the gin it has been found that grades comparable to hand-picked cotton can now be attained.

The use of controlled heat is the key to the success of most of these pre-ginning operations and has a great deal to do with the final quality of the cotton as it leaves the gin and goes into the bale. In order for the

the LMC Money Maker



is on the road to setting new records in dealer profits

The LMC Money Maker with its increased capacity of 7500 to 8000 gallons with 250 lb. W.P. allows high payloads with a low tractor and trailer investment.

The neckdown design gives you a low center of gravity, higher road speeds and more gallons in your storage tank when you need them. Whatever your LP Gas transport problem, you'll find this unit is a Money Maker for you.

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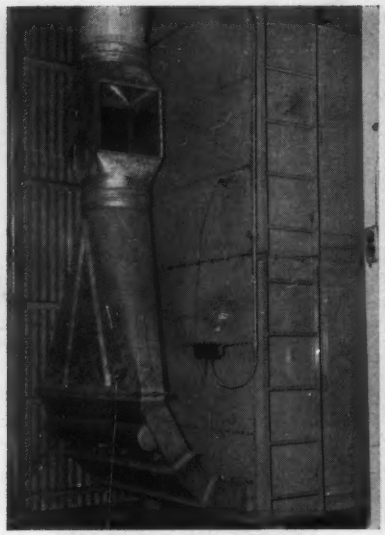
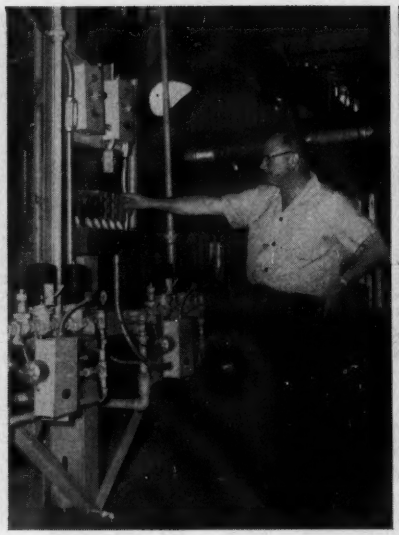
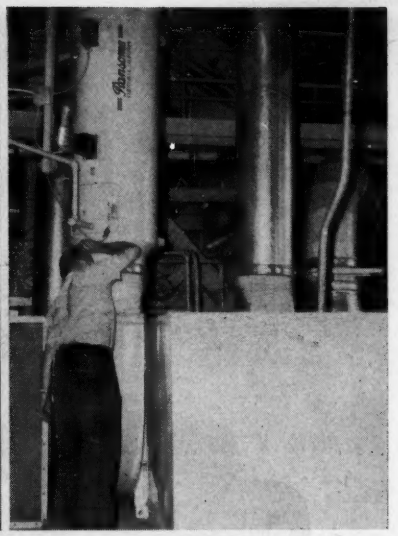


Burners are controlled by two microswitches actuated by a thermostatic element.



Carl E. Golden, of Ransome Co., starts the test run. All controls are on one central panel.



The burner is mounted vertically above the first blower to conserve working space.

cleaners to do their job of removing the leaves, cotton boll fragments and other trash, it is necessary to dry the cotton rather thoroughly. With hand-picked cotton this is not so much of a problem as the pickers do not start work in the morning until the dew has dried off the cotton plants. The cotton comes from the fields in nearly uniform moisture content and containing very little trash which must be separated from the cotton preparatory to feeding it to the gins.

High moisture content of the picked cotton interferes with the ginning operation. The cotton fiber is stripped from the seeds by the action of the circular saws. Each gin stand has 90 of these saws mounted 1½ in. apart on a common shaft. If the cotton contains too much moisture the fibers cling to the teeth of the saws, jamming in the slots and causing the gin to stop. Then the long job of picking the cotton lint off all the saw teeth begins. When dried to the proper moisture content, cotton goes through the gins and drops off the teeth without difficulty.

Ideal Moisture Content

The ideal moisture content for ginning and the finished cotton is approximately 7% and this is the median at which the ginner shoots in operating his drier. Moisture content may be reduced below this point but it is not desirable since the loss in weight reduces the grower's profit and excessive drying of the cotton may also result in down grading due to weakening or breaking of the fibers. It has recently been determined, also, that in ginning cotton which is field-dry to the desired 7% moisture content, the appearance of the cotton can be improved and a whiter, more lustrous fiber obtained by making a short exposure of the cotton to heat before ginning. The resulting cotton fiber is brighter and can be graded slightly higher as a result of the whiter and more lustrous appearance.

Moisture Reduction

The moisture content of the cotton as it comes from the field is not uniform even in the same load. While some gin operators possess a high degree of skill at regulating the drier to produce the desired moisture reduction, it is not humanly possible to manually regulate the burners closely enough to achieve absolute uniformity in the finished results. A sensing mechanism that is far more sensitive and accurate than human judgment is needed to accomplish really accurate results.

The latest developments in cotton gin burners and burner controls are aimed at securing uniformity of moisture content as the cotton leaves the drier to go to the cleaner where it is made ready for distribution to the gin stands. Because it is susceptible to extremely accurate control and because of its general availability at low prices throughout the cotton-growing areas, L. P. gas has become the predominant fuel for the heating requirements of cotton ginning. Its clean-burning characteristics permit it to be used in the form of direct heat, the products of combustion being included with the heated air passing out of the burner.

This has not been practical with oil or other heavy fuels because of the oily or impure products of combustion which must not be permitted to come in contact with the cotton fiber. With the older types of fuel it was necessary to use indirect heat; generally in the form of steam, and this was not susceptible to the accurate control or quick changes required in drying machine-picked cotton nor was it nearly as efficient as the direct firing which can be used with gas.

Modern Installation

One of the most complete and modern cotton ginning heat installations is the one which has recently been installed at the Old River gin near Bakersfield, Calif. This equipment was engineered and built by Ransome Co. of Emeryville, Calif., and installed under the supervision of Ransome's chief engineer, Carl E. Golden. These burners and accompanying control equipment were specially engineered for cotton gin applications.

The burner is entirely automatic

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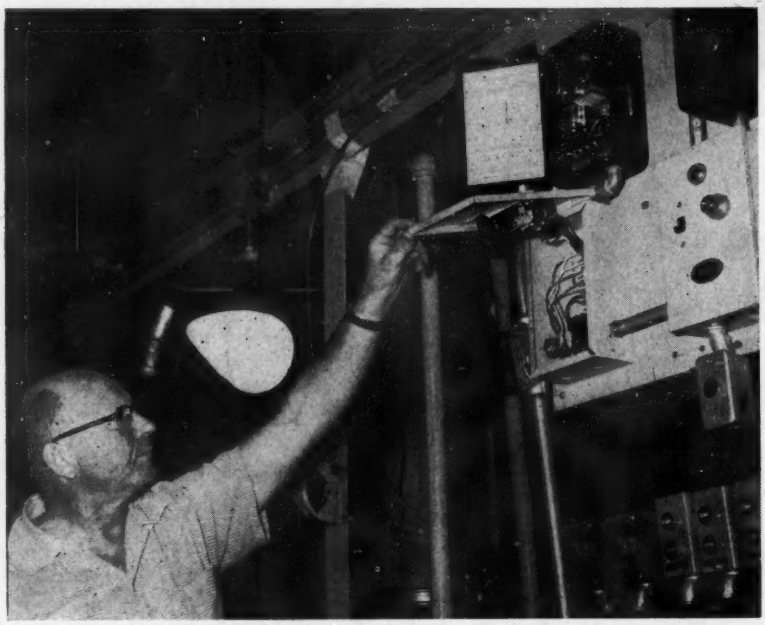
Cotton Drying... Complete, responsive control system assures uniformity in heating results

in its operation and control, and after it has been set to the proper heat output it will operate continuously without readjustments until a major humidity change occurs in the weather. The operator sets his adjustments at a central control panel at the beginning of the season, setting the control valves for the correct heat input at each of the three stages of the burner. After the settings are correct the valves are simply left in those positions until there is some reason to make a minor change in one or more of the adjustments.

When the ginning operation closes down for the night or the weekend, the gas is turned off by means of a single valve back in the supply line, and the adjustments are all set ready for operation when the gin is started on the next shift. There is no delay for adjustments when operation is resumed. The operator merely turns on the main gas valve, ignites the burners, waits long enough for the air in the ducts to come up to operating temperature and opens the valve which starts the cotton running through the drier.

The heat is introduced into the burner in three phases. The first phase, which is controlled by a manual valve, is set to maintain a minimum flame. This provides less heat than is required to produce proper ginning moisture content in the driest masses of cotton that come into the hopper. Since this flame burns continuously it acts as a pilot for igniting the fuel supplied for the second and third phases of the burner operation. The second and third phases are controlled by a thermostatic sensing element which is set into the drying column near the outlet. This thermostatic control is equipped with two micro-switches which are set to open their respective circuits at temperatures 5° apart. At temperatures 5° F below the set point, all three stages of the burner are in operation. When the temperature comes up to the setting of the first micro-switch the circuit which it controls is interrupted and the 1-in. Hydramotor valve on the gas supply line controlled by this switch closes. When the temperature at the thermostatic control comes up to the second micro-switch setting, which is 5° above that of the first micro-switch, it also communicates with a Hydramotor valve which is on a ¾-in. gas supply line. This valve also closes, leaving the minimum flame as the sole source of heat.



Complete wiring diagrams and service instructions are attached inside covers of Fireye control and junction boxes.

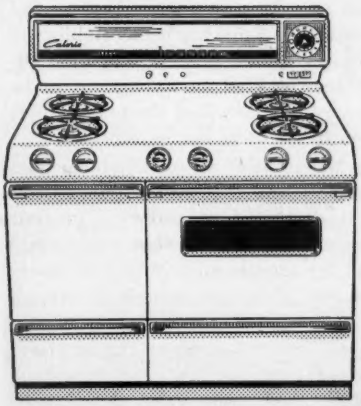
As the temperature in the drier gradually drops it comes into the temperature range at which the micro-switches slowly open their respective valves, and heat is again supplied through the automatically controlled burner stages to maintain a very close temperature range at the thermostat. Since the Hydramotor valves open slowly, the heat is introduced gradually. This is essential since a rapid rise in the temperature of the air stream would cause rapid expansion in the duct system and thereby weaken the joints until the ducts would come apart. The valves close rapidly.

The temperature changes of the air in the drying columns are produced by the evaporation of moisture from the cotton as it comes in from the loading hopper. Dry, warm cotton has relatively little effect on the temperature of the air leaving the drier, but when a load of wet cotton comes through, the evaporation of the moisture contained in the fiber produces a large amount of cooling effect in the moving air.

The extremely quick response of the controls in supplying additional heat results in a very satisfactory degree of uniformity of moisture content when the cotton leaves the drier. This result is far more accurate than has ever been obtained by manually-controlled burners depending on human judgment for their operation.

The Old River gin is equipped with two of these complete Ransome burner installations, which may be used separately or together as conditions dictate. The input rating of each burner is 3 million Btu. An unusual feature of this burner is that either natural gas or L. P. gas may be used without any changes in the burner. Only minor adjustments at the control valves are necessary in changing from one fuel to the other. Gas is admitted to the burner at a maximum of 5 psi pressure, which is controlled by a regulator placed in the gas line just ahead of the burner controls.

The entire installation is protected by safety shutoffs which operate



Caloric PALM SPRINGS new 40" range
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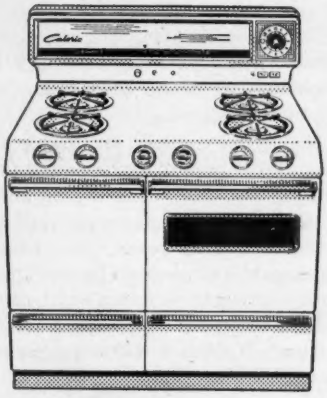

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Cotton Drying... Three safety control devices give protection in case of flame or power failure

automatically in case of minimum flame failure, or failure of electric power in the plant. The basic safety protection is an air-flow switch which is set to a close tolerance in relation to the suction of the fan. Air movement is secured by the use of two No. 176 fans, one of which pushes the air into the burner and the other pulls it from the outlet of the drier. As long as normal air flow is maintained this switch is kept closed, thereby making it possible to energize the solenoid and Hydramotor valves.

If, however, the air flow is reduced either by failure of the power circuit to the fans or on account of partial plugging of the system with cotton, the air-flow switch circuit is interrupted and the valves in the gas supply line automatically close. These valves will remain closed until the operator manipulates switches and re-establishes the minimum flame.

A second safety control is a Fireye, which consists of a selenium sensing element mounted in the burner housing and exposed to the minimum flame. This control is sensitive only to infra-red rays which reach it from the constant minimum flame. The operation of this control is an almost direct parallel to the 100% safety shutoff used on automatic gas water heaters. If the minimum burner flame goes out the control is no longer energized and it allows the 100% safety shutoff valve in the fuel line to close and remain closed until it is opened by a spring loaded switch on the control panel.

The third safety protection included in this installation is a high limit temperature controller in the outlet of the burner housing. This is set to operate when the temperature at that point reaches approximately 500°. It is interconnected with the two Hydramotor valves which it closes automatically if the temperature reaches that for which the high limit temperature control unit is set.

In making a cold start the operating sequence is as follows:

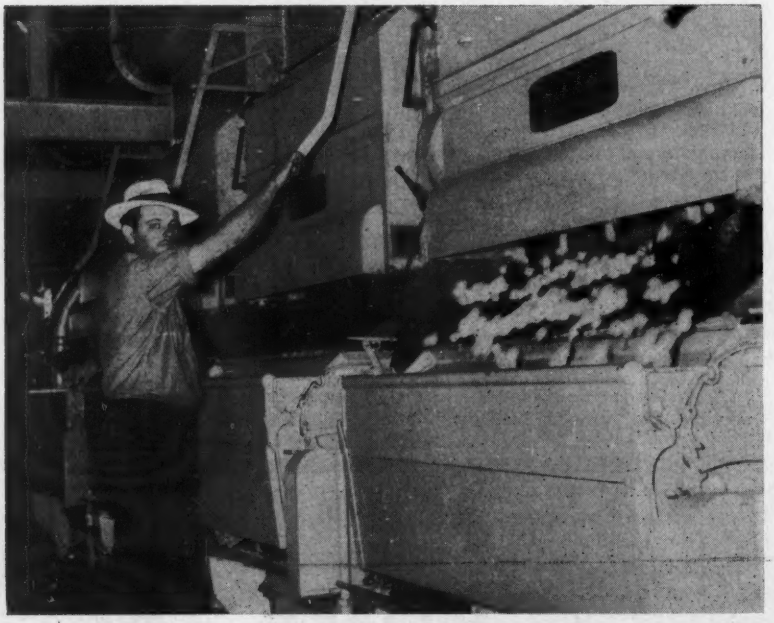
Start the fans. Press a switch button at the operator's panel. The suction of the first fan causes the airflow to permit the minimum flame solenoid to be energized, thereby permitting gas to flow to the burner and become ignited by the spark which continues as long as the push button is held in. A red light appears on the operator's panel when the minimum flame has been established. Releasing the push button then enables the Hydramotor valves to be energized, provided the temperature controller calls for more heat.

When the minimum flame becomes established the automatic controls take over and cause the Hydramotor valves to open or close in response to the temperature controller set point. If the cotton passing through the drier increases in moisture content or increases in rate the temperature at the control point begins to drop. This causes the Hydramotor valves to introduce more gas to the burner. Drier cotton or a slower rate of cotton flow causes the Hydramotor valves to meter in less gas to the burner. This relieves the ginner from constantly checking the nature of the incoming cotton and due to the three stage heat control makes it possible to hold a uniform temperature at the control point which is necessary if maximum yield and highest grades are to be attained.

All of the controls for the operation of the motors which power the ginning machinery and the blowers in the heating system are grouped in a central control panel. This panel also includes the control for the ignition system at the burners which consists of automotive-type spark plugs actuated from a 110 volt circuit through transformers.

In order to conserve floor space each fire-box section of the Ransome heater at the Old River gin is mounted vertically directly on the outlet side of the fan. Some ginning concerns prefer to mount the fire-box section horizontally on the floor. In either case the burner operates on the pressure side of the fan thereby permitting the fan to operate on atmospheric temperature air. This arrangement promotes fan efficiency and eliminates the abuse to the fan which would occur if the burner were to operate on the suction side of the fan and be heated by the hot air stream.

The Old River gin is one of several which have been similarly equipped for the San Joaquin Cotton Oil Co. There are also a number of similar installations operating in Arizona and in the cotton producing sections of northern Mexico. ■



The ginner starts the cotton flowing into another gin stand during the trial run.

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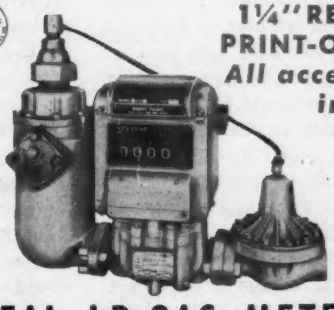

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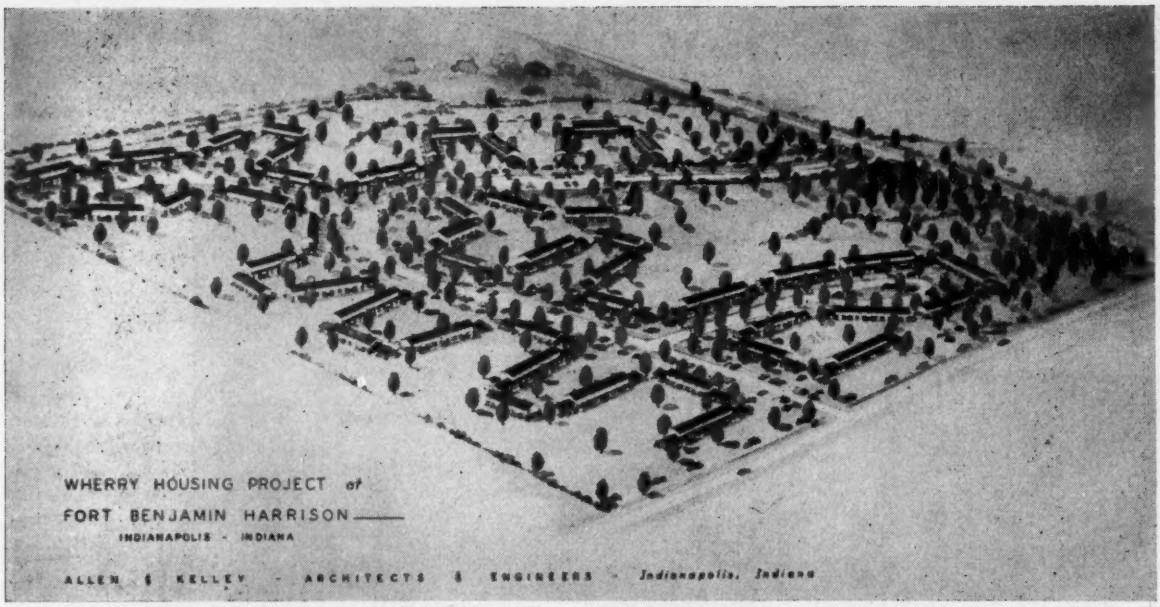
WHERRY HOUSING PROJECT of
FORT BENJAMIN HARRISON
INDIANAPOLIS - INDIANA
ALLEN & KELLEY - ARCHITECTS & ENGINEERS - Indianapolis, Indiana

Drawing of Benjamin Harrison Village shows the 48 buildings on 10-acre plot. Bulk tanks are out of project area. L. P. gas comes in through underground mains.

L.P. Gas Proves Itself Far Superior for Army Finance Center's Personnel

By Lawrence Gralla

When it came to the question of heating two housing projects, Allen & Kelley, architects and engineers in Indianapolis, debated on oil, coal, and L. P. gas. Coal could not be used as there were no facilities for delivering and storing it or removing ashes, and fuel oil would require many underground tanks installed at considerable expense. Because L. P. gas can be piped in the gaseous state from bulk storage tanks, is far cleaner than coal, and is comparable to either fuel in price, it won out in both installations.

BPN field report

WHEN the firm of Allen & Kelley, architects and engineers in Indianapolis, drew the plans for the 300-unit Benjamin Harrison village, it chose L. P. gas for cooking, heating, and hot water.

"We don't favor any one fuel over another," explains John R. Kelley. "Different fuels are best in different situations. In this, LPG was best."

L.P. gas is used, in this case, for firing forced-warm-air furnaces, for automatic water heaters, and for cooking. It is piped in the gaseous state from bulk storage tanks near the housing area through mains and into the buildings.

Under construction last year, Benjamin Harrison village is a project for accommodation, primarily, of the new Army Finance center's civilian personnel and their families. It is about ten miles from Indianapolis adjoining Fort Benjamin Harrison. The 300 apartments, varying in number of rooms, are in 48 buildings arranged along curved streets on a ten-acre plot, partially wooded. There are four to eight apartments in each building.

The buildings are garden type with through ventilation, two stories high, concrete slab foundations, stud walls, brick veneer on the first floor, and asbestos siding on the second floor. They have standard insulating board in walls and rockwool in ceilings.

Ray von Spreckelsen, chief engineer for Allen & Kelley, studied the cost and equipment for all possible fuels. The best fuel supply, he found, was a central bulk storage tank for L.P. gas, with the fuel being piped underground, as gas instead of liquid, to each unit.

Coal, although a cheaper fuel, could not be used because there were no facilities for delivering it, storing it or removing ashes. The houses have no basements, and use of coal would tend to lower rental levels.

Fuel oil also presented storage and delivery problems. To store it, many underground tanks would have to be installed at considerable expense, and deliveries would call for filling

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each one individually. Aboveground tanks in the project are and would be unsightly and hazardous.

A central oil storage point, with distribution via underground piping, was also considered. This was discarded because of technical problems in maintaining proper pressures. The oil would have to be pumped from the central tank under 30-lb pressure into a loop, and individual burner pumps would take the oil from this loop. If a burner stopped running, pressure from the loop might force oil into the combustion chamber. The controls and valves needed to make such a system safe and workable would have been too costly.

Circulating steam from a central source, probably a coal-fired boiler, also was ruled out. The boiler room and entire installation would have been too expensive, and the cost of 24-hour operating personnel would more than exceed the savings in fuel.

Utility-supplied gas was not used because the local utility could not release its gas for space heating.

L.P. gas, thus, was the most convenient, but the cost remained to be determined. Applying the heat loss, degree days of heat needed, furnace efficiency and heat production per pound of fuel, a standard formula indicated that it would take about 31,500 cu ft of L.P. gas to heat a two-bedroom apartment for one season. Converting this to gallons, and figuring L.P. gas to cost about 7.5 cents per gal. delivered in railroad tank cars, the cost of fuel for heating a small apartment came out to approximately $68 per season. To cover hard-to-predict factors like thermostat setting, extra heat loss through open windows, or improperly adjusted heating systems, the estimate was set somewhat higher.

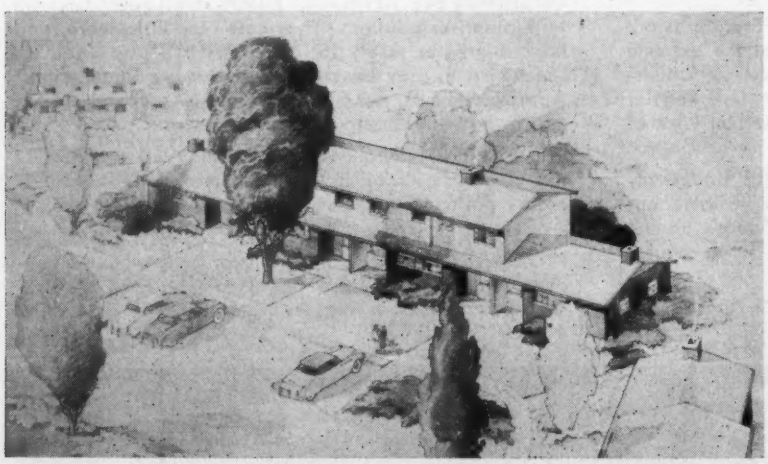
John R. Kelley (left) and Ray von Spreckelsen studied comparative fuel costs and convenience on housing project job, decided on L. P. gas as best for the purpose.

A figure as high as $90 per family per season was still considered reasonable, and the cost for water heating and cooking was also in line. To achieve these costs, however, it was necessary to buy the L.P. gas at the tank-car rate and store it at a central point. In this case it was feasible because a railroad spur runs by a few hundred feet from the edge of the project area. An arrangement was made to place the central storage tanks at the railroad spur and to run the gas mains underground to the project area.

The fuel distribution system is a simple one, with the only mechanical equipment being the unloading compressor. A 5-hp compressor unloads the liquid from the tank car, via a riser assembly, into three inter-connected 30,000-gal. tanks. A 5-in. main takes the gas into the project area, and 2-in. mains break off it at many points to serve groups of units. A 1-in. service pipe leads into each building.

The possibility of metering the gas being used by each unit, and billing accurately for fuel cost, was considered. In this case, it proved impractical. The initial cost of the meters and the regular expense of reading them would have increased costs considerably. Instead, the operating company which is in charge of the project bills each family each month for an average fuel cost, including this in the rent.

Allen & Kelley recently planned a project closely similar to this one at the Crane Naval ammunition depot in Crane, Ind. That one, already complete, has 200 units of varying sizes, and had similar fuel distribution and storage problems. The L.P. gas system at Crane, similar to the one now operative at Fort Benjamin Harrison, has been reported entirely satisfactory in operation. ■



Typical building is this one, with six apartments, concrete slab foundations, forced warm air heating. L. P. gas fires forced warm air furnace, is also used for hot water supply and cooking.

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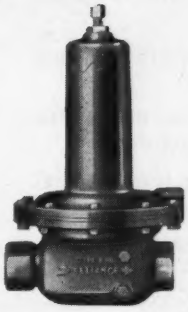
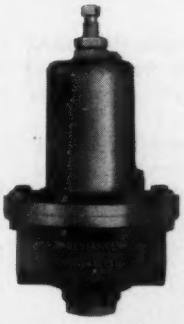
Back of every RELIANCE Regulator are the experience and integrity of a manufacturer that has specialized in designing and building Regulators for 40 years. For applications in the Ammonia Industry... *Specify* RELIANCE REGULATORS.

When ordering specify exact outlet pressure required so proper spring can be installed.



TYPE HPR-10—Outlet pressures 2½ to 25 PSI.

TYPE HPR-20—Outlet pressures 25 to 350 PSI. ¾"—1"—1¼"—1½"—2" screwed pipe sizes only. Complete Specifications in Bulletin #48.



TYPE RV-200—Metal Seats.
TYPE RV-201—Composition Seats. ¾"—1"—1¼"—1½"—2" screwed pipe sizes only. Outlet pressures 1 to 225 PSI. Complete Specifications in Bulletin #49.

AMERICAN®
METER COMPANY
INCORPORATED (ESTABLISHED 1836)

RELIANCE
REGULATOR DIVISION
ALHAMBRA, CALIFORNIA

DEALERS

who are featuring

EMPIRE

EMPIRE GAS WINTER AIR CONDITIONERS

(Basement, Utility Room and Closet type)

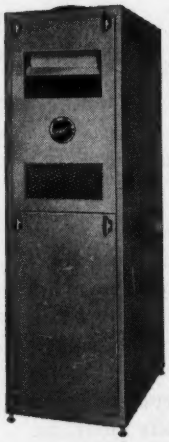
report

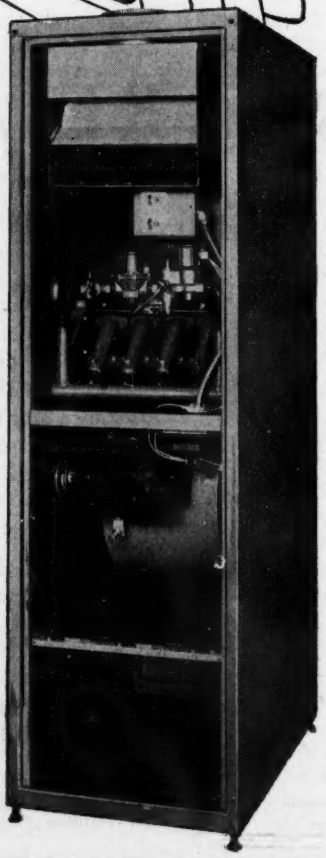
KING-SIZE Profits!

There's NO DOUBT *about it!*

ONLY THE NEW EMPIRE HAS ALL THESE IMPORTANT VALUE FEATURES!

1. Empire's powerful blower is cradled in rubber for amazingly quiet operation.
2. The heat exchanger is engineered to eliminate expansion and contraction noise.
3. The over-size filter traps dust, dirt and pollen . . . helps keep your home shining clean!
4. Smart, durable steel cabinet has fused-enamel finish, is beautifully designed.
5. Vented to remove combustion wastes. Welded gas-tight. Draft diverter prevents down-drafts.
6. Empire's exclusive "Thriftmatic" Gas Burner delivers every penny's worth of heat from your fuel. Featuring the "stainless steel" ribbon type cast iron burners.
7. Automatic room temperature controls, necessary limit switches both blower and bonnet and automatic pilot (100% cut-off type) are standard equipment.
8. All controls, burners and heat exchangers are accessible from the front — Flues can be cleaned from front without any disconnections or dismantling.





AMERICAN GAS ASSOCIATION — TESTED WITH NATIONAL SAFETY REQUIREMENTS — APPROVED

MEMBER — national • LP-GAS PROMOTIONAL program

A Great Name in Gas Appliances

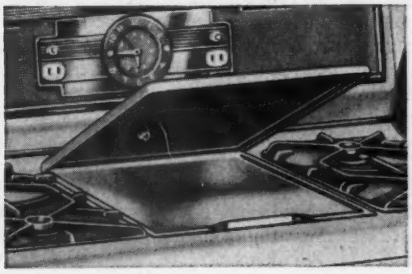
EMPIRE STOVE COMPANY

BELLEVILLE, ILLINOIS

New REVOLUTIONARY ADVANCEMENT IN MODERN GAS COOKING

Dixie 30" Fully Automatic GAS RANGE

WITH GIANT GRIDDLE



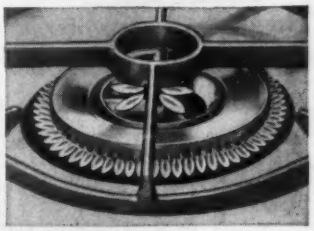
THE MOST COOKING SPACE IN LEAST SURFACE AREA

Generous aluminum griddle, plus four regular burners (conversion grate for big fifth burner). Large *full-width* oven and broiler!

THIS 30" RANGE with giant griddle, represents a big step forward in gas cooking—the last word in convenience for small, modern kitchens. You can sell DIXIE with confidence that you are offering *more* for your customers' money in style, convenience, performance and honest-to-goodness VALUE. Check DIXIE features against all others: Gleaming Titanium porcelain finish . . . new continuous grates over Dixie's exclusive Therma-Flex burners . . . fully insulated oven, engineered for balanced heat distribution . . . new beauty—everything for *less*. There is no better line of quality ranges on which you can maintain full profit margins.

THERMA-FLEX BURNERS

Exclusive! Give instant selection of most-used temperatures: "Quick-Boil," "Maintain-A-Boil," and "Simmer-Glow." "Thrifti-Kool" oven pilot. Safe, economical.



Send for Catalog with Complete Line of DIXIE Ranges and Profit Data

Address Dept. 1220

MUCH EASIER TO CLEAN

Dixie Ranges are newly styled—cleanly styled for easy cleaning—with all rounded corners inside and out. The Titanium porcelain finish is stainproof, acid-resistant.

Dixie DIXIE PRODUCTS, INC., CLEVELAND, TENNESSEE

DEALERS

who are featuring

EMPIRE

EMPIRE GAS WINTER AIR CONDITIONERS
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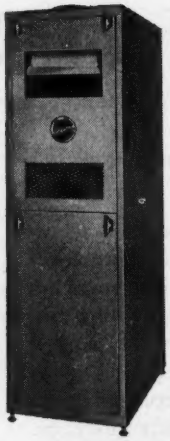

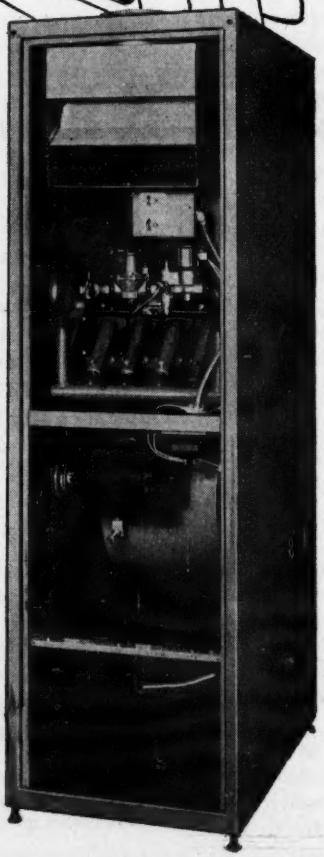

AMERICAN GAS ASSOCIATION — COMPLIES WITH NATIONAL SAFETY REQUIREMENTS — APPROVED

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EMPIRE

A Great Name in Gas Appliances

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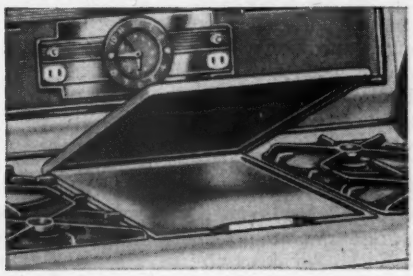

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Generous aluminum griddle, plus four regular burners (conversion grate for big fifth burner). Large *full-width* oven and broiler!

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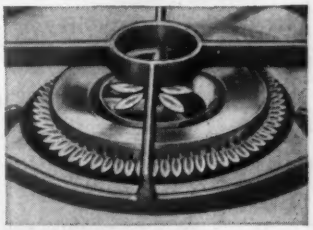

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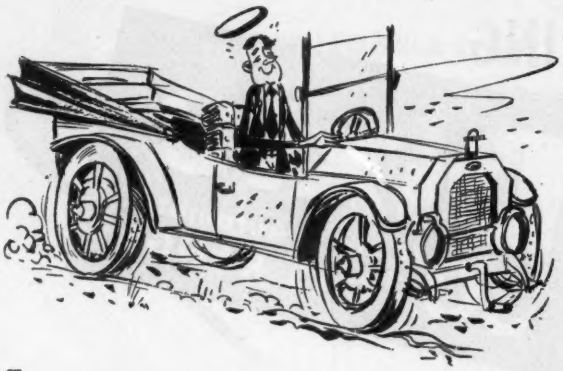
Dixie Ranges are newly styled—cleanly styled for easy cleaning—with all rounded corners inside and out. The Titanium porcelain finish is stainproof, acid-resistant.

Dixie DIXIE PRODUCTS, INC., CLEVELAND, TENNESSEE

MAKE EVERY DAY SAFE DRIVING DAY



LAST year President Eisenhower designated Dec. 15 as "Safe Driving Day", and the big publicity guns thundered the subject throughout the land. Death took a partial holiday—traffic fatalities were down 15% compared with the previous year. It proved one thing—consciously trying to drive safely avoids an important percentage of accidents that might otherwise happen.

Dec. 1 is "Safe Driving Day" this year. So what? Just this: If careful driving can reduce accidents on one day of the year, it can reduce accidents every day. So why stop with just one safe driving day when we need so badly to be safe every day?

The National Safety Council has given us a thorough analysis of the conditions under which accidents happen. In most cases they are not the causes—just the surrounding circumstances. Accidents are still caused by faulty human judgment. Their analysis is a guide to safe driving—not an alibi for unsafe driving. Here it is:

Speed:

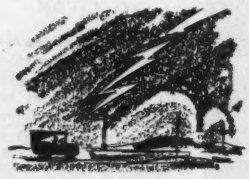
About 3 out of every 10 drivers involved in fatal accidents in 1954 were violating a speed law.

SLOW DOWN AND LIVE

Drunk Driving:

One out of every 5 drivers involved in fatal accidents in 1954 for whom condition was stated had been drinking.

IF YOU DRINK, DON'T DRIVE



Weather Conditions:

In one out of every six fatal accidents in 1954 the weather was rainy, snowy, or foggy.

IF YOU CAN'T SEE, DON'T HURRY

Road Conditions:

An unfavorable road condition —wet, muddy, snowy or icy— was reported for nearly one out of every 3 accidents.

IT'S SO EASY TO SLIDE INTO TROUBLE

Night Driving:

Of all traffic accidents reported during 1954, more than one in every 5 occurred between 5 and 8 p.m.

SLOW DOWN AT SUNDOWN

Visibility:

The driver's vision was obscured in one of every 8 fatal accidents. Roadside obstructions produced fewer of these accidents than rain, snow and sleet on the windshield.

IF YOU CAN'T SEE WHERE YOU ARE GOING, DON'T GO

Vehicle Condition:

Six percent of vehicles involved in fatal accidents had unsafe or defective brakes, tires or lights.

IF THE VEHICLE IS NOT SAFE, DON'T DRIVE IT

Driver Condition:

About 1 in 14 drivers having fatal accidents were in unsafe condition because of sleepiness, fatigue, illness or defective sight or hearing.

TAKE CARE OF YOURSELF — DEATH IS PERMANENT

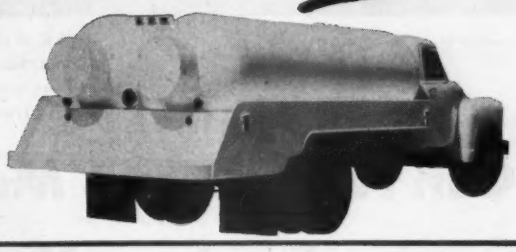
Pedestrians:

More than one-fifth of all vehicle accident fatalities were pedestrians. More than one-third of the pedestrians killed were age 65 or over.

IT IS EVEN WORSE TO KILL CHILDREN

Courtesy In Driving Saves Lives. It is Also Fun — Other People Are So Surprised.

LOOK AT IT *THIS* WAY!

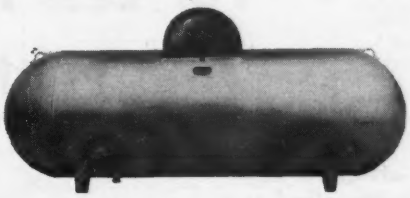


Don't lose peak season profits by waiting on tank deliveries. When you deal with McNamar the year around you are assured of immediate deliveries during any season.

Whether it's a 115 gallon to 1000 gallon domestic system or a 6000 to 30,000 gallon storage tank, we can meet your requirements for size, quality of workmanship, and speed of delivery.

McNamar can also solve your financing problems on both storage and domestic tanks.

We can assure our dealer a competitive price, a quality product, and assistance with any problems that might confront him in future years.



LPGA

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McNAMAR

BOILER & TANK CO.

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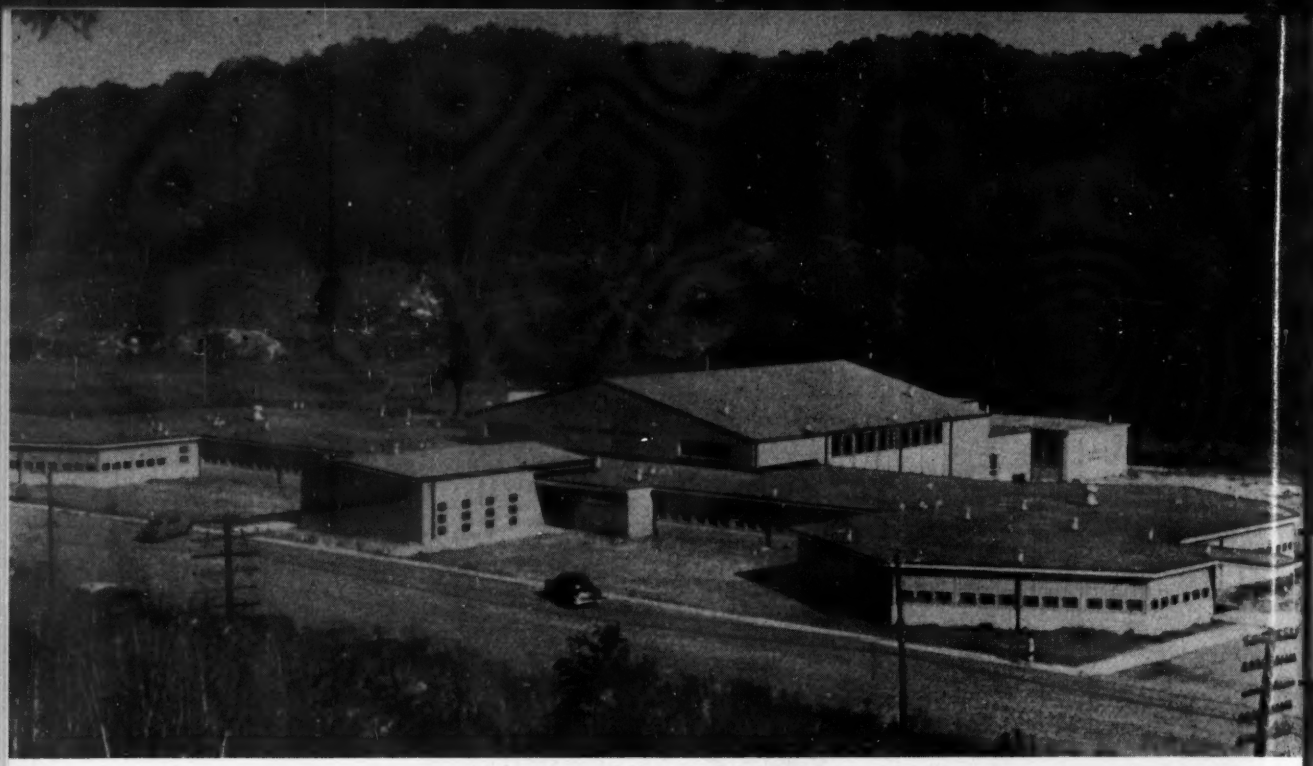
TULSA, OKLAHOMA



Typical of this unusual concept in schoolhouse design is the new school at House Springs, Mo. Wings of a basically hexagonal shape admit a maximum of light and air, provide improved acoustics, and permit the use of new and improved heating systems.

We Can Now Have a More Functional School For Less Money— And With Gas Heat!

A highly efficient heating system installed at a price much lower than that of a conventional school furnace is made possible by the unique construction of the "Maximlite" school. These structures, which couple economy with efficiency and convenience throughout, are particularly well adapted to make the best use of the inherent advantages of LPG.

BPN exclusive

By Carl Abell
Editor

AN ARCHITECT from a mid-western state has created a basic design that makes it possible to build twice as much schoolhouse for the same amount of money. And after the school is built, the maintenance costs are only a small fraction of those necessary with the conventional construction used in the past. Against tremendous opposition from vested interests that have tried to retain the expensive construction practices of the past he has "made it stick." Currently dozens of schoolhouses are being built according to his plans in various parts of the United States and Canada, and dozens more are already in use.

One of the essential features of this money-saving design is the heating system. Individual thermostatically controlled gas-fired inclosed furnaces are used in each room, which has resulted in one of the most outstanding economies of the entire plan. In several of the schools recently completed the gas heating system for the entire school has cost less than the chimney that would be required for the conventional central heating plant.

In addition to the low cost features this new type of school provides better lighting, better ventilation, and better acoustics than has been attained in most other school construction. Time required for construction has also been materially reduced.

T. Ewing Shelton, registered architect of Fayetteville, Ark., is the man

CHECK THESE EXCLUSIVE MASTER FEATURES

ON "The Time Saver"

Patent Pending

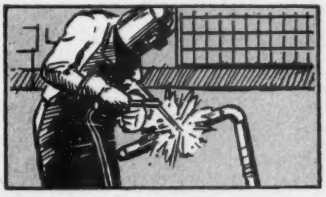
YOUR CHOICE OF CLOSED END . . .

(Illustrated above)

When operating in country where there is ice and snow, the enclosed type is recommended. There is ample room for meter and hose reels plus extra space for other uses. The rear compartment opens up with the doors entirely out of the way to give ample working space. One latch locks all three doors.

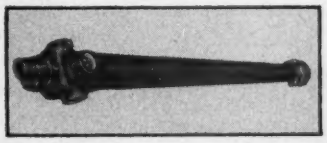
WELDED CONNECTIONS STOP LEAKS

All pipe connections are welded, where it is feasible. This assures trouble-free service and a greater savings to you!



TUBULAR SHAFT PUMP DRIVE

The pump driving equipment consists of the best joints money can buy and tubular driving shafts — the same design which propels the truck. A lifetime of trouble-free service.

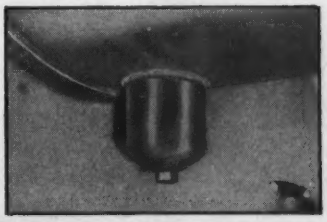


ONLY 60 MINUTES TO CHANGE TRUCKS

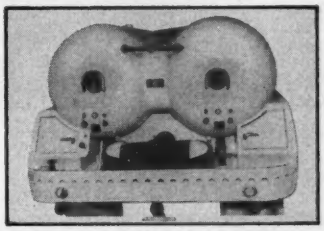
Merely disconnect power takeoff and unscrew the mounting bolts. Entire unit is ready to be moved. There isn't a single pipe fitting to change. The elimination of a big plumbing job eliminates the cause of leaks and trouble.

TANKS PUMP DRY

. . . with the exception of a pint, which remains in the sump. This sump catches all sediment and eliminates the need of a strainer in the suction line, which slows the flow. The sump is drained periodically to remove the sediment. The tank outlet is at the rear, where there is a 2" line inside that takes suction from the sump at the front.



. . . OR OPEN END



If you are in a section where there is not much ice and snow, the open end type rear is recommended. The meter is enclosed and there is a large tool box on the opposite side plus ample room for the hose in the center. If you do not use power hose reels, the rear compartment is designed so you can wrap the filter hose outside and the vapor hose inside of the rack. Either hose can be used separately.

SPRAY NOZZLE FOR FASTER FILLING

Refrigerating principle lowers the pressure and makes the tank easier to fill.

REAR MOUNTED PUMP STOPS LEAKS

When the pump is mounted on the truck chassis, the twisting and careening of the truck is murder on pipe connections. Master Engineers have designed a leak-proof truck tank with pump and pipe fittings, mounted as a single unit, on the rear of the tank.

STREAMLINED BODY

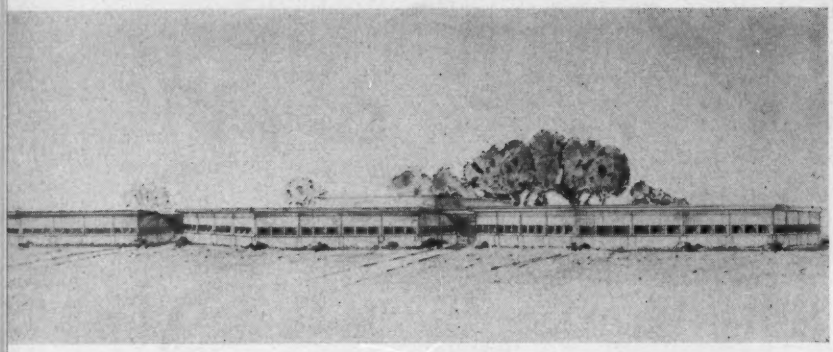
The body has been streamlined to beautify its appearance. It is finished with a hot enamel process for high lustre and greater durability.

NO PLUMBING INSTALLATION

The Time Saver comes completely installed on the truck of your choice. However, *The Time Saver* tank unit can be furnished for a "Do It Yourself" installation. There is no complicated plumbing job, for the entire pumping unit is mounted on the rear of the tank.

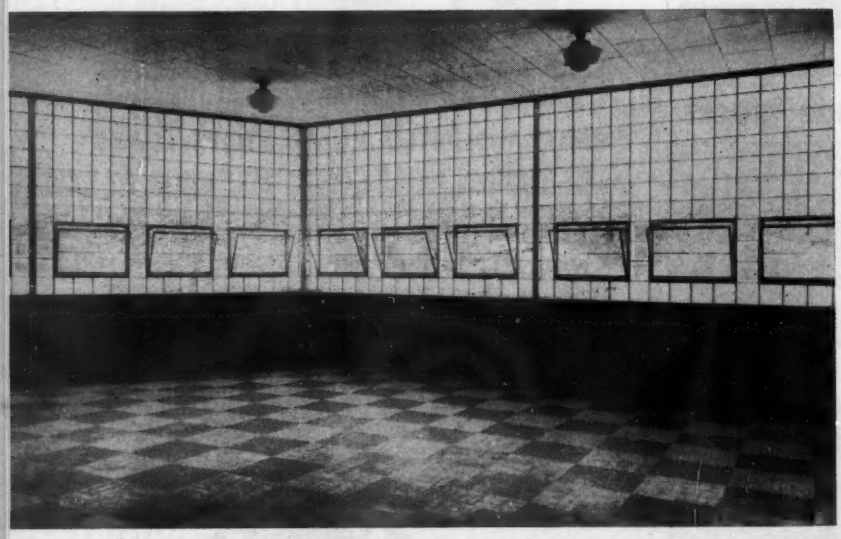
MASTER TANK & WELDING

P. O. Box 5146 • Dallas, Texas • PRospect 2441



This type of construction is now gaining in popularity in other areas of the country—as witness this architect's elevation of a school for Findley, Ohio.

Each classroom is heated by an individual forced warm-air furnace, enclosed in a corner of the room next to an outside wall. Through use of this type of installation, it was possible to eliminate basements from the structure. Note glass block wall.



Warm air is circulated from the heater through a duct which extends along the entire length of the two outside walls at floor level. Grill outlets are located every 6 ft.

who made this outstanding contribution to American education. His "Maximlite" schoolhouse design (trade name registered) is being built in a dozen states and in Canada, with costs of construction ranging from $5.47 per sq ft up. Maximum costs are still much less than the national average cost of schoolhouses in the United States for 1952, which was close to $14.50 per sq ft.

This cost reduction is of immense importance in view of the critical shortage of school facilities throughout most of the country. For the past few years the school systems of the nation have been falling behind the demand by 70,000 classrooms per year. Every 7½ minutes we have one more classroom added to the growing shortage. To meet this deficiency increasing numbers of schools are required to operate in two shifts, and increasing numbers of students are being provided with inadequate educations—at a time when we need rapidly increasing numbers of highly trained technical and professional personnel.

The total shortage of classrooms is now estimated by the U. S. Office of Education at more than 500,000. Seven million of the 40 million children now in school are going to classes in firetraps, and 3½ million elementary students are in buildings more than 50 years old. It is estimated that by 1960 there will be 48 million students in the U. S., and the classroom shortage will have increased to 700,000. It is obvious that a program that will cut the cost of building these school facilities in half will be of tremendous consequence.

The Maximlite schoolhouse design introduces innovations in shape as well as in the features of construction. The classrooms are built in clusters of six rooms, with a general hexagonal shape for the group. This approaches the circular shape, which provides the maximum interior area with the minimum length of outside wall. The rooms fit together somewhat like pieces of pie, but instead of building the inside walls from corner to corner they end at the centers of the straight walls of the hexagon. Rooms are entered at the inner apex from a hall which divides the cluster in half. This construction also reduces the amount of space lost in corridors, and increases the percentage

Pedigreed Perfection

Shot-blasted PREST-O-LITE Cylinders are marked for positive identification through a series of quality-control tests that exceed every ICC requirement. Performance in these tests is remarkably uniform—and is unsurpassed in the industry.

This "pedigreed" quality is built into every PREST-O-LITE Cylinder as a result of LINDE's 50-odd years' experience in making and using compressed gas cylinders. You can pay more, of course, but you can't buy better than the PREST-O-LITE brand.

See your local LINDE representative, or write today for full information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N.Y. In Canada: Linde Air Products Company, Division of Union Carbide Canada Limited, Toronto.

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

of space available for educational rooms. The necessary closets and enclosed storage spaces are built into the same corner as the entrance door, leaving a five-walled room design with only 2 parallel walls, a feature of great importance in improving acoustics. (The better sound studios used in radio, television and making recordings are built with un-parallel walls to avoid echoes). The acoustical treatment is further improved by the use of asphalt tile floors, glass blocks, light weight block walls, and acoustical type ceiling materials.

It is from the construction of the outside walls that the name "Maximlite" is derived. The lower 3 ft of the outer walls is made of poured concrete. In effect this section is a continuation of the foundation. Above this, the entire wall structure is glass. Clear windows in metal sash are provided in abundance, but most of the upper wall consists of hollow glass blocks. These are clear glass up to the top level of the windows, but the upper portion of the wall is made of blocks with prismatic interiors, so installed as to throw the light upward to the ceiling. This provides distribution of light far superior to anything that may be obtained with windows alone, and the amount of light available materially reduces the electric power bills. Since they have recently become available, special tinted blocks similar in lighting effect to the anti-glare glass now used in automobiles have been used on the sides exposed to the sun.

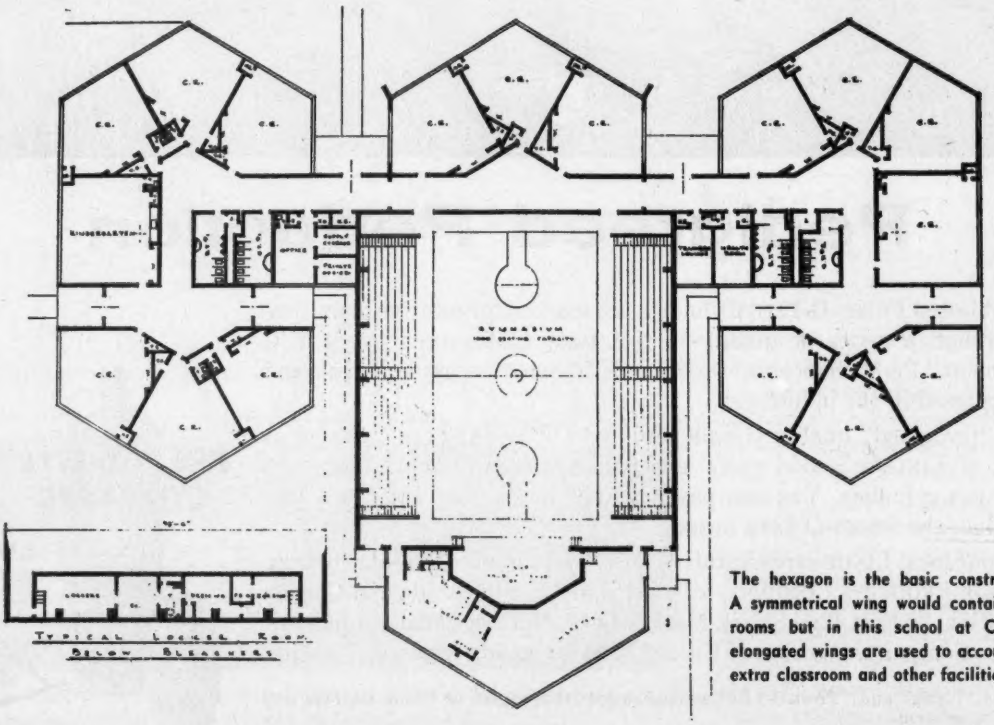
Inside walls are made of Haydite light aggregate blocks. The surface of these is filled with casein paint of appropriate color, which eliminates the need and the future expense of plaster. For the wainscoats needed in the corridors, washrooms, and domestic science laboratories these blocks are given a terrazo surface on one or both sides, as needed, during manufacture. This eliminates a large part of the expense that would be involved in using tile for these wainscoats. Wherever possible this principle of eliminating the work of special craftsmen is followed out.

Assembly halls, gymnasiums, libraries and other rooms which do not fit readily in the hexagonal design are made in whatever shape and dimensions seem most desirable, but incorporate the same money-saving principles of construction.

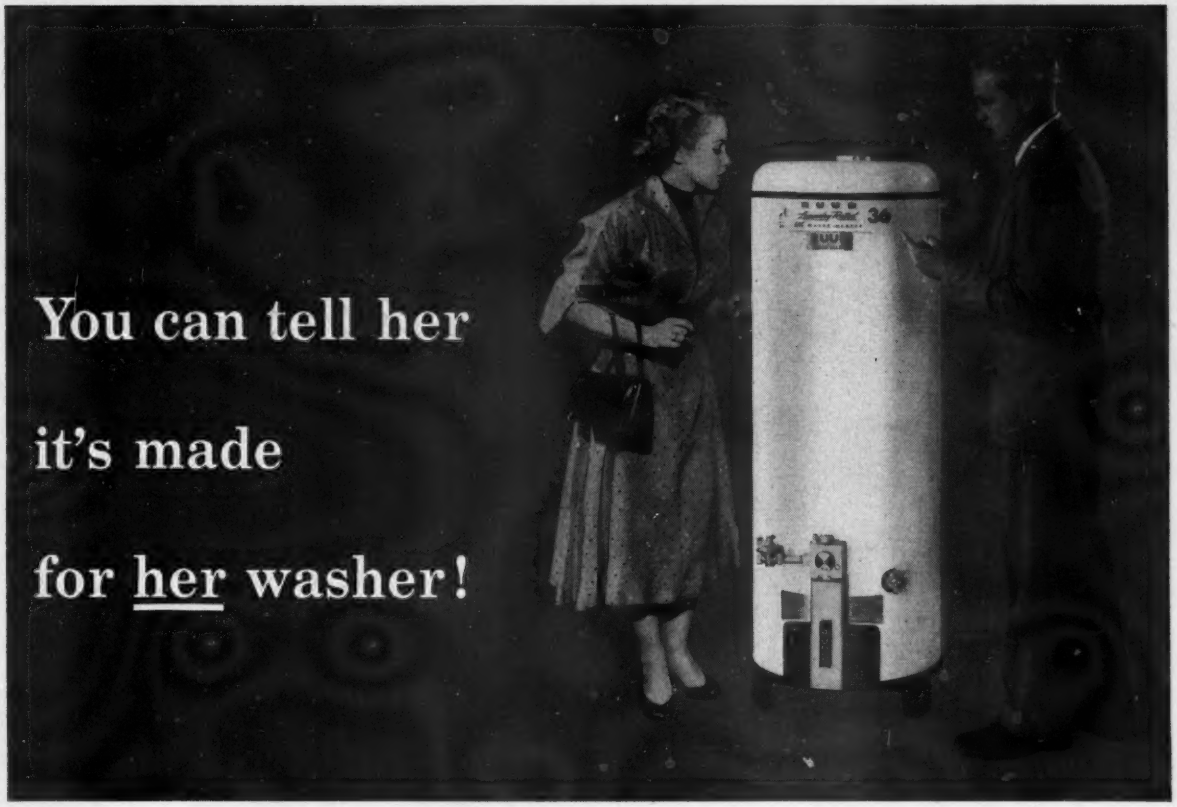
The heating system is unique in school construction, is extremely effective, and leads to two most important savings in construction costs. There is no central heating plant, and because the heating system for each room is in the room itself, there is no basement, thus eliminating excavation, basement flooring and extended foundation costs.

An individual forced farm-air furnace is used in each individual classroom heating system. This is enclosed in a corner of the room next to the outside wall, and connected with a specially designed duct which extends along the entire length of the two outside walls at floor level, with grilled outlets every 6 ft. The duct is designed as part of a set of metal shelving which occupies the entire wall space below the windows. This combination unit, called "shelvoduct," was designed by Mr. Shelton, and is used exclusively in Maximlite schools. It comes in sections for convenient shipping and quick installation, and is finished in baked enamel to hold future maintenance costs to the lowest possible figure.

Heating costs are held down by two features of construction. Heat loss through glass blocks, which make up most of the exposed wall surface, is considerably lower than with conventional brick and plaster construction, and the heating installation is designed to recirculate 50% heated air for conservation of heat, and 50% fresh air for adequate ventilation. The percentage of fresh air may be



The hexagon is the basic construction unit. A symmetrical wing would contain six classrooms but in this school at Caney, Kan., elongated wings are used to accommodate an extra classroom and other facilities.



RUUD *Laundry Rated* ALCOA® ALLOY

Automatic washers have created terrific additional demands on water heaters. But many a housewife doesn't know—or finds out too late—that her water heater just wasn't made for the job. Now you can show her one that *is*.

The Ruud Laundry-Rated Alcoa Alloy automatic gas water heater—available in six models—will keep up with any automatic washer made—continuously—and still supply enough hot water for bath, kitchen—every household use.

AND LET HER KNOW ALL THIS ABOUT THE RUUD ALCOA ALLOY!

- Can't cause rusty, discolored hot water—ever—because its solid aluminum alloy tank is red-rust-proof.
- Same moderate price class as lined-steel-tank types! Gives extra service and economy for more trouble-free years.
- Delivers more hot water, faster, than any other water heater of its size and price class.
- Optional Ruud duo-temp feature delivers two temperatures from the same tank at the same time: 180° extra-hot water to serve automatic washers; 125° tap-safe water for bath, shower and lavatory.
- First and only water heater with tank of solid Alcoa Alloy aluminum. Uses Gas, the fast, economy fuel.

®Aluminum Co. of America

ACT NOW! TAKE FULL ADVANTAGE OF THE BIG PROMOTION BEHIND THE RUUD LAUNDRY-RATED ALCOA ALLOY!

RUUD MANUFACTURING CO. Dept. 12-4,
2025 Factory St., Kalamazoo 24F, Mich.

☐ Please have a water heating specialist call on me
☐ Send me literature

NAME_____ TITLE_____

BUSINESS NAME_____

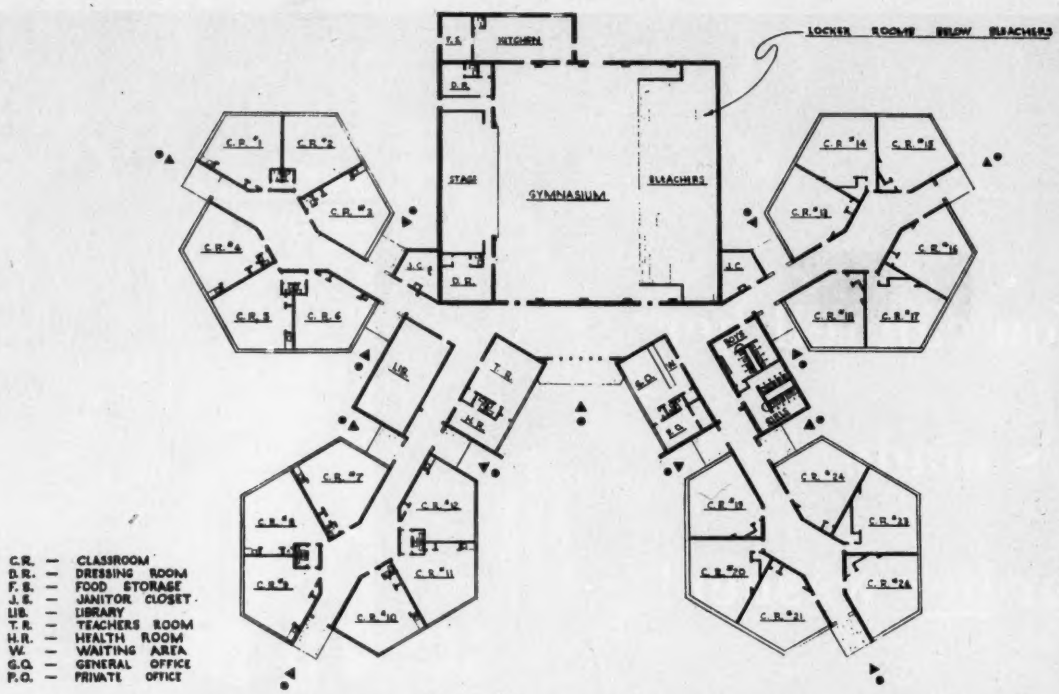
STREET_____

CITY_____ STATE_____

MAIL THIS COUPON TODAY

Ruud Gas Water Heaters

Kalamazoo, Michigan • Toronto, Ontario



In the Haysville, Kan. school, the basic floor plan is altered somewhat by offsetting the two halves of the hexagon. Note the extremes of light and circulation that the design affords.

regulated to suit occupants of the room. On account of the extensive duct openings and exceptional heat distribution, there are no cold drafts even in freezing weather.

Heater control is by means of individual room thermostats, so the correct temperature can be maintained in each room in spite of variations in exposure to sun or direction and force of wind. The same heating system is used in the schools which have been built according to this plan in Alberta, Canada, as in the southern states. The thermostat control is of the "on and off" type, and if more heat is needed, the burner is "on" more and "off" less.

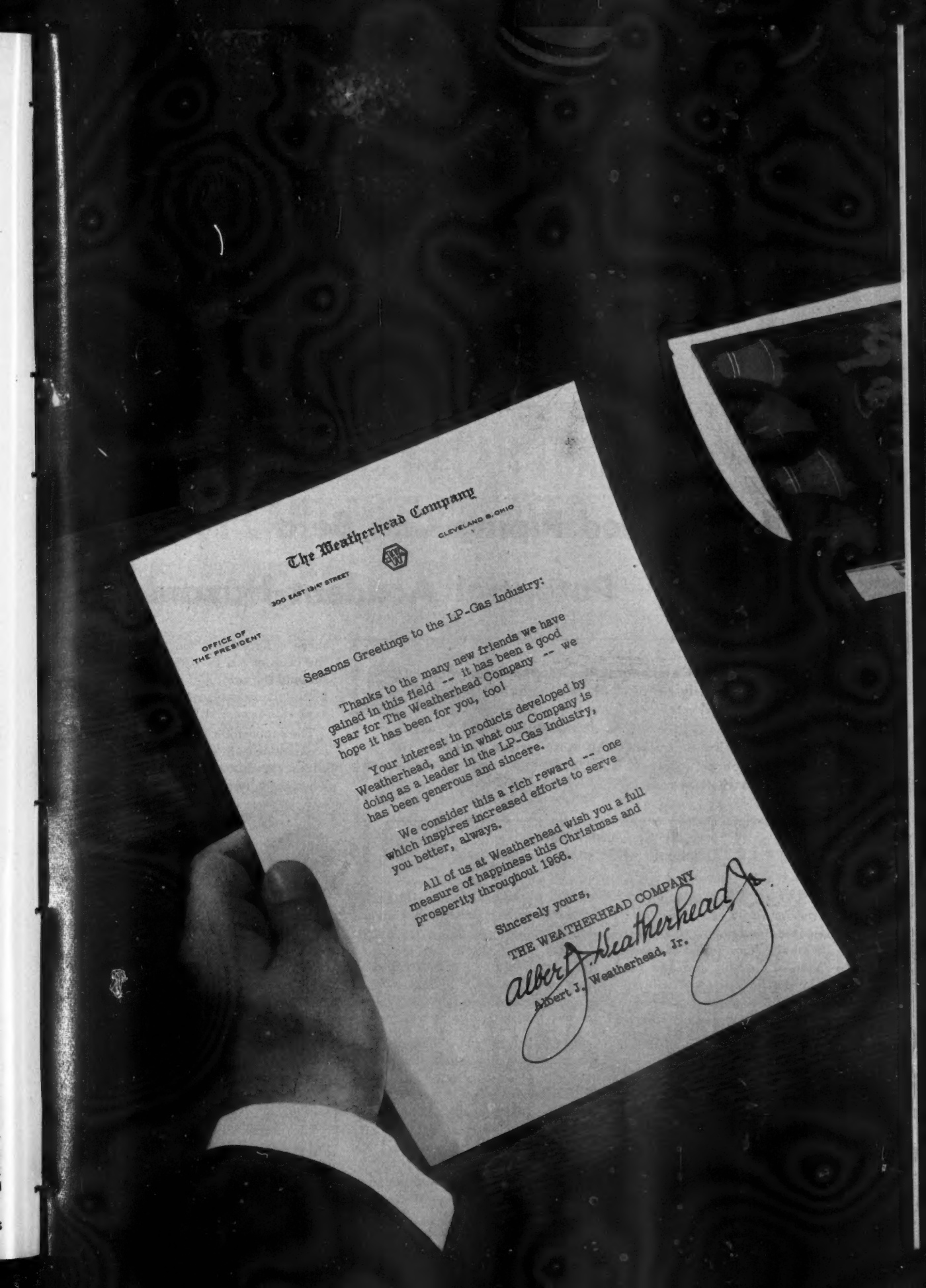
The fresh air intake for the heater is at floor level. The same opening provides access for the gas pipe, which connects with a supply line laid around the outside of the building. There are no gas pipes inside the building other than the short stub that goes through the wall to the burner, and this is not vented through roof, as the heater is in a cabinet with a raised ledge on the room side, and a floor level vent through the wall.

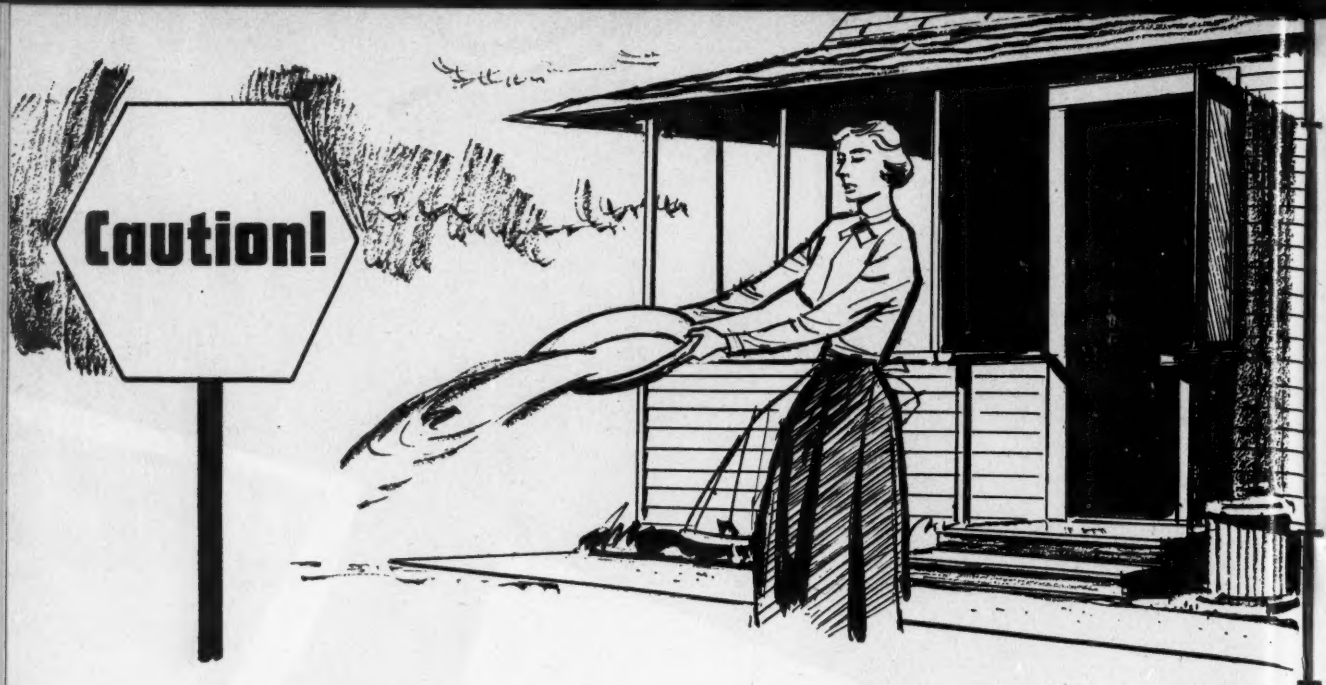
Gas supply may be either utility or LPG, and gas heat is an essential factor in the low cost of the Maximlite school building. No other heating installation can be provided that supplies so much in the way of comfort for such low investment.

The first Maximlite school building was opened for use in September 1951. Its design included 20 rooms including the offices, study hall, library, cafeteria, and music room. As this was the first of the kind, the details later developed were not complete in that school, although the basic conception was followed. This school was designed for 480 pupils, and the cost per square foot, including the heating system, was $5.65. Many improvements have been added in subsequent construction jobs, but the basis remains the same and costs are consistently very low in comparison with conventional construction.

T. Ewing Shelton owns the copyright on the Maximlite name and design, and has patent applications pending on certain of the unique design features. Since architects must have state licenses, he can personally design and supervise construction of buildings in the state of Arkansas only. To enable school districts in other states to take advantage of this low cost construction, Mr. Shelton licenses selected architects in other states to design and build Maximlite schools. Qualified firms of architects have been licensed in more than half of the states.

To the L. P. gas dealer the promotion of low-cost school housing involving the use of gas heat is a matter of considerable importance. It is not only a public service—it is also a most important means of business promotion. When gas heat is put in a schoolhouse, someone has to supply the gas, and it is a desirable addition to the annual volume. But even more important, it is under the observation of members of a high percentage of the families of the community. With gas heat in the building, the school officials can hardly refrain from having gas cooking equipment in the school cafeteria and the domestic science department. Children become familiar with gas as domestic fuel. They not only influence the purchase of appliances by their parents, but they are being conditioned to become gas customers when they grow up and set up homes of their own. It will be very much worth while for L. P. gas dealers, both as individuals and through their associations, to bring the idea of this new low-cost school construction to the attention of the local and state school authorities, and to do whatever is needed to secure approval and acceptance of the plan. ■


The Weatherhead Company
CLEVELAND 8, OHIO
300 EAST 131st STREET
OFFICE OF
THE PRESIDENT
Seasons Greetings to the LP-Gas Industry:
Thanks to the many new friends we have gained in this field -- it has been a good year for The Weatherhead Company -- we hope it has been for you, too!
Your interest in products developed by Weatherhead, and in what our Company is doing as a leader in the LP-Gas Industry, has been generous and sincere.
We consider this a rich reward -- one which inspires increased efforts to serve you better, always.
All of us at Weatherhead wish you a full measure of happiness this Christmas and prosperity throughout 1956.
Sincerely yours,
THE WEATHERHEAD COMPANY
Albert J. Weatherhead, Jr.



Older Buried Piping Can Be a Potential Accident Hazard

C. Chester Pate, Oklahoma LPG Administrator, has been working particularly closely with the dealers in his state on the prevention of accidents. We are pleased to reprint this bulletin, which was distributed at the Oklahoma LPGA convention, in which he outlines the most serious causes of domestic and farm accidents with L. P. gas, and prescribes methods for their prevention.

By C. Chester Pate
Oklahoma LPG Administrator

OUR greatest worry as manifested in recent accidents has been buried piping and tanks that have been in service for a period of years. The chemical reaction from the different kinds and types of soil on piping and tanks makes it necessary that a test be run at frequent intervals to be sure there is no leak in either the underground tank or the buried pipe. Being heavier than air, L. P. gas naturally seeks the lowest level, and will stay underground for many feet rather than rise to the surface. This makes it hazardous to have an L. P. gas tank or piping near a cellar, well or basement. On several occasions we have had loss of life and property damage when some member of the family would light a match or when a live spark from an automatic appliance or a gas refrigerator in a gas-filled cave or basement caused an explosion.

* * * *

At the G. L. M. home west of Bessie, Okla., a small explosion in a cave caused severe burns to Mr. and Mrs. M., and slight burns to two of their children. Mr. and Mrs. M. went to the cave on a stormy night, lit an old-fashioned lantern and hung it near the top of the cave; then he went back to the house and got the three children and took them near the back of the cave. When Mr. M. came to the front and raised the lantern globe to extinguish the light the explosion occurred.

The supposition is that the gas had accumulated on the floor of the cave without combustible air-fuel ratio when the lantern was first lit, but the

five members of the family getting into the cave stirred the gas on the floor, causing a flammable mixture at the time the lantern globe was raised.

The propane line was 25 ft from the cave. We took the line loose at the tank and at the house for a test. With a 15-lb air test, the pressure

Have you heard about it?—

THE FUEL SUPPLY PLAN THAT BULK PLANT MEN CREATED

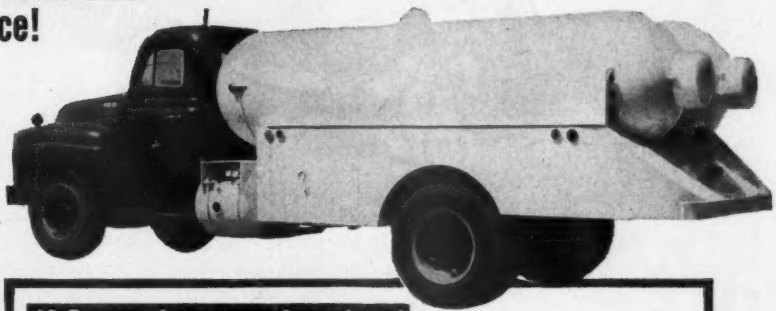
It meets every hope you've ever had for WORRY-FREE fuel service!

United's fuel supply plan was created to meet *all* the hopes and needs of bulk plant operators. Based on long experience, this L-P gas supply program affords you the absolute maximum in worry-free, trouble-free service the year 'round. Propane, butane or mixtures.

Underground Storage? Yes, we have plenty of it.

Bank on the 10-point UNITED plan to serve your needs better this winter! We're as near as your telephone.

By truck or tank car, United's huge transportation fleet is a solid assurance of on-time delivery always.



10 Reasons for a worry-free winter!

1. Finest-quality fuel obtainable.
2. Our own multi-hundred-unit fleet of tank cars, trucks.
3. We draw from twenty producing plants in four states.
4. Competitive freight rates.
5. Automatic "keep-fill" service.
6. Guaranteed supply and delivery.
7. Exact odorization control.
8. Technical advice and service.
9. Prompt claims adjustment.
10. Quick parts and equipment service from warehouse.

CALL YOUR UNITED REPRESENTATIVE TODAY FOR DETAILS AND PRICES

UNITED PETROLEUM GAS COMPANY

4820 EXCELSIOR BLVD. • MINNEAPOLIS 16, MINN.

S. R. Navickas
1 West St. Albans Road
Minneapolis, Minnesota

R. J. Bell
1628 Thompson Avenue
La Crosse, Wisconsin

W. A. Stange
RFD 2 Box 337
Aurora, Illinois

R. E. Haugen
4200 Grand Avenue
Bldg. 3 Apt. B-23
Des Moines, Iowa

G. L. Stephens
1011 Electric Bldg.
Houston, Texas

R. E. Belkcom
8 Northwest 3rd Street
Ortonville, Minnesota

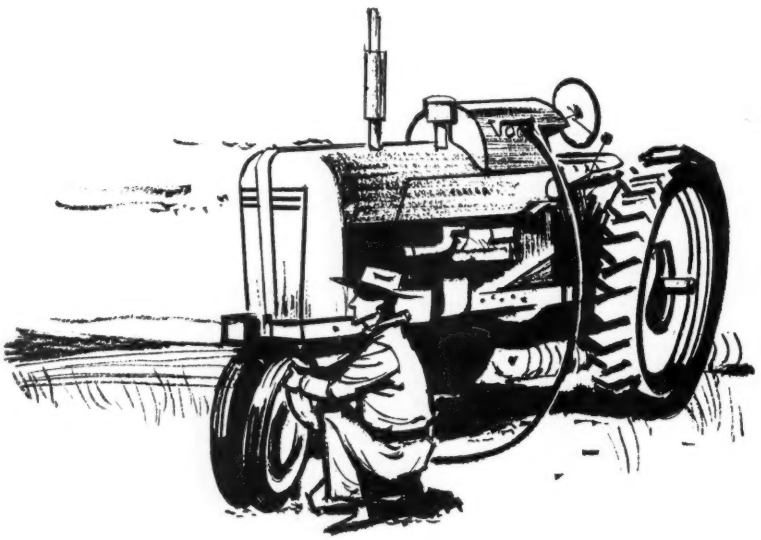
C. H. Koch
202 Leggett Bldg.
Midland, Texas

C. A. Ballard
Box 988
Clinton, Mississippi

held less than five seconds, denoting a bad leak in the line.

On further investigation, we found that the propane line crossed the sewer line between the house and the cave. The family had been throwing the dish water out the back door, where it soaked into the ground over the propane line, causing the pipes to corrode. Had this line been tested at regular intervals by a liquefied petroleum gas service man this accident would not have happened.

* * * *



At the H. home southwest of Noble, Okla., Mr. H. started down the steps of the basement and struck a match. An explosion followed. A small leak was found at a hot water tank installed in this basement several years ago, but it is not definitely known whether the gas followed this line to the basement or whether the leak developed around the hot water heater.

* * * *

Mrs. G. K. of Covington started to the cellar to get some fruit. She struck a match to make the selection, and the gas-filled cellar exploded. The L. P. gas piping from the propane tank to the house ran less than 3 ft from the cellar. This installation was made only seven years ago. Yet it had rusted out, allowing gas to escape, which followed the pores in the ground to the lowest place and concentrated in this cellar.

* * * *

Next to the buried piping and tanks, the installations and hook-ups made by the "Do-It-Yourself" type of consumer have caused us the most trouble.

An accident from this cause happened at the M. B. home, east of El Reno, Okla. Mr. B. bought a second-hand stove, which was designed for natural gas, and connected it to the butane line without converting the appliance or testing the lines. There was a leak in the oven and when enough gas had accumulated, it was ignited from the pilot light from the stove burners. Two boys, age 9 and 17, were severely burned. Mr. B. was burned around the feet and legs. This accident could have been avoided by having the installation made by a licensed liquefied petroleum gas installer, and having the appliance properly tested before being placed in use.

* * * *

The above are the major accidents in recent months. However, we are consistently called on to make inspections and investigations of minor accidents throughout the state. In most cases these are caused by ignorance or carelessness.

We must not content ourselves with the thought that all piping is safe just because it is buried. We will continue to find these leaky pipes. The safety of the customer and his family should be the objective of every L. P. gas dealer, but unless an air test is made periodically of all underground piping that has been buried any length of time, the result could be tragic. The aim of every petroleum gas dealer is service, but why not make this *service with safety.*

* * * *

A number of farmers are rigging up a hose with an air chuck and using it to inflate their tractor and implement tires. It is the duty of the dealers and their truck salesmen to warn these customers against this practice, as it is very dangerous and we feel sure that some of them are doing this without realizing how dangerous it really is.

Another bad practice that we have found is to remove the excess flow valve so that a truck or tractor might be filled a little faster. This is a very bad practice.

We have also found a few of these tanks that do not have a cut-off valve at the tank. Each tank should be equipped with a cut-off valve at each end of the hose, and if they do not bleed this hose after each filling it is necessary that a relief valve be placed between the cut-off valves. ■

How to Find the Best Billboard Locations

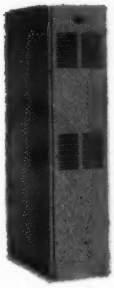
ONE of BPN's readers made a worthwhile suggestion regarding the outdoor advertising section of the May appliance sales issue. Eugene H. O'Neil Jr., marketing and research manager of National Advertising Co., Chicago, pointed out that LPG dealers planning to use outdoor advertising should be aware of a service offered by the highway departments and departments of public works of all 48 states.

State traffic flow maps are available from which the amount of traffic at any point on the state's roads may be determined. Comparison of traffic on the main arteries in his area helps the dealer decide which location is the best for his outdoor advertising.

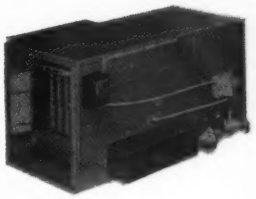
The address of the department furnishing traffic flow maps for any state will be furnished by BPN upon request.

HEATING—
COOLING
COMBINATIONS

COUNTERFLOW
FORCED AIR
FURNACES



VERTICAL
FORCED AIR
FURNACES



HORIZONTAL
FORCED AIR
FURNACES

Smartest line
you've ever Seen
WEATHERAMIC
in bank note green

Who's lucky? You! Why? Because now you can offer your customers all the superior engineering you expect from Utility, plus the sales appeal of color.

This good-looking Weatheramic series in Bank Note Green brings you good luck you can cash in on. Utility patented Blowers and Sy-lent* Heat Exchangers are yours to sell with confidence in the Weatheramic series. Utility's high efficiency, trouble-free operation and truly functional design will continue to help build your good reputation with every sale.

Sell Weatheramic for customer satisfaction.

Weatheramic LINE

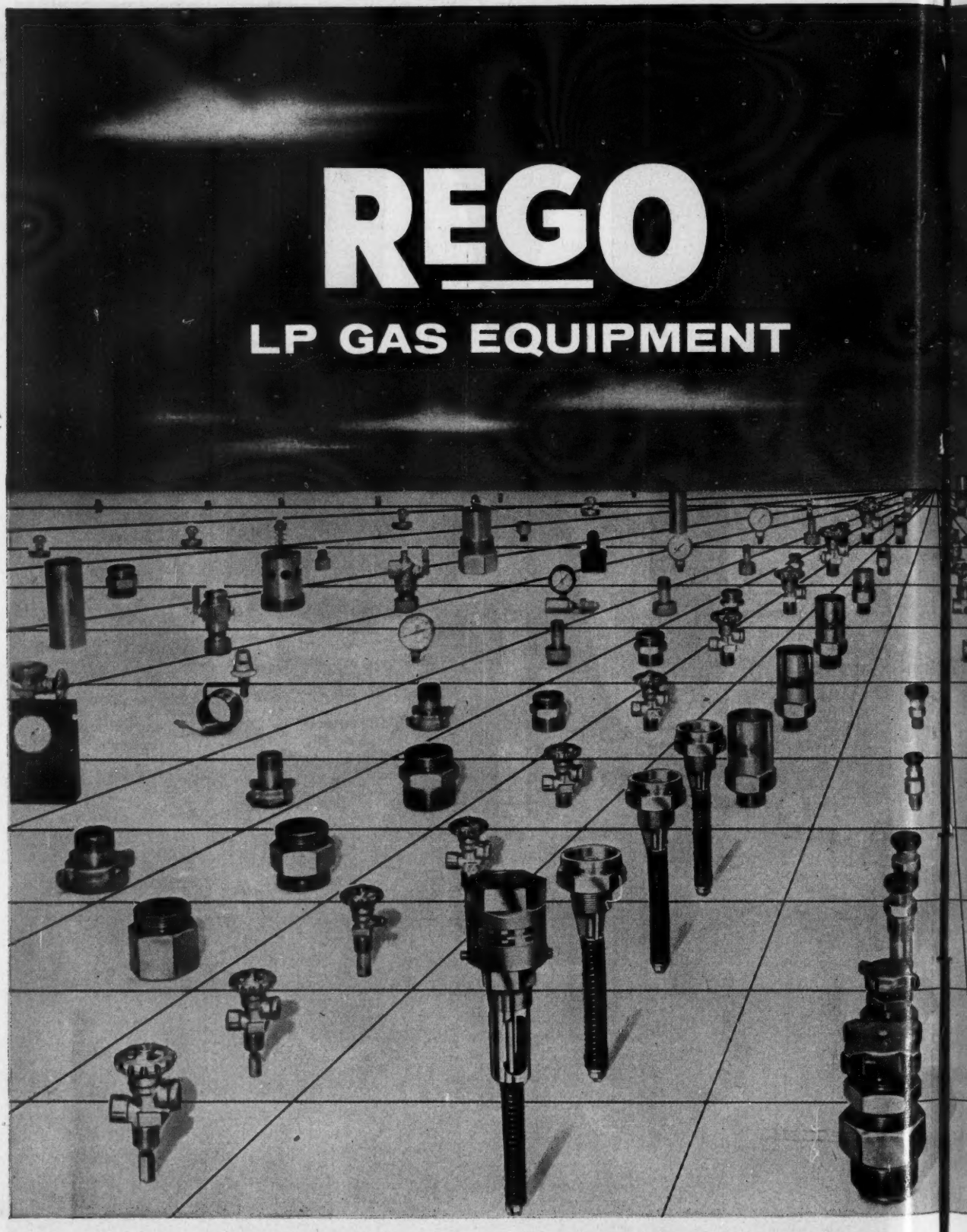
UTILITY

FORCED AIR FURNACES / AIR CONDITIONERS

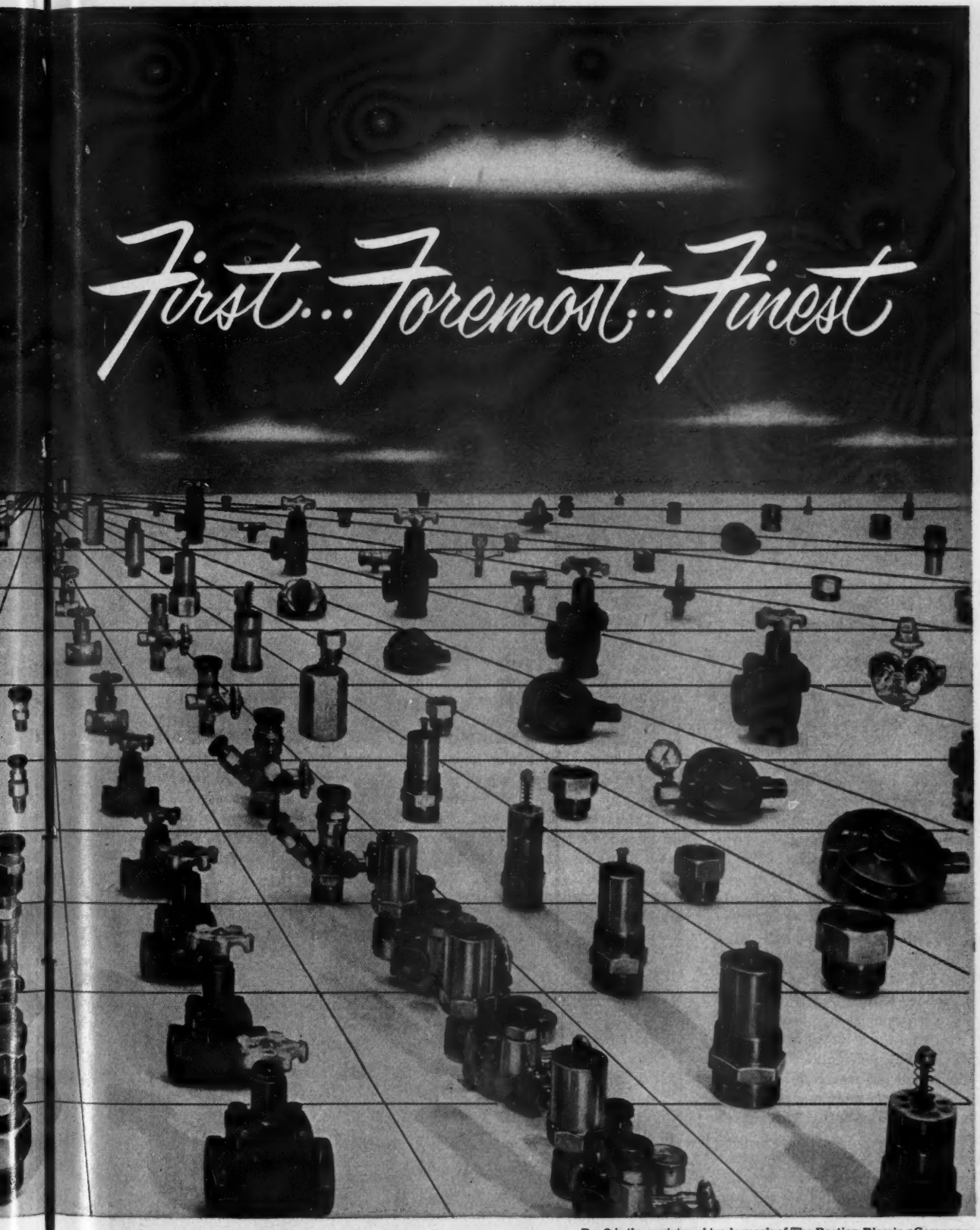
A Singular Living family tree... all branches of UTILITY

GAFFERS & SATTLER AND OCCIDENTAL automatic gas ranges
UTILITY furnaces air coolers air conditioners water heaters

UTILITY APPLIANCE CORPORATION 4851 south alameda street, los angeles 58, california



The REGO trade name covers the most extensive and complete line of LP Gas equipment available . . . and REGO *quality* is recognized as the standard of the industry.



REGO is the registered trade mark of The Bastian-Blessing Company

The BASTIAN-BLESSING Company 4205 West Peterson Avenue • Chicago 30, Illinois

Fenstamacher's "Little Texas" truck not only provides quick service in emergencies, but is also an effective traveling billboard.

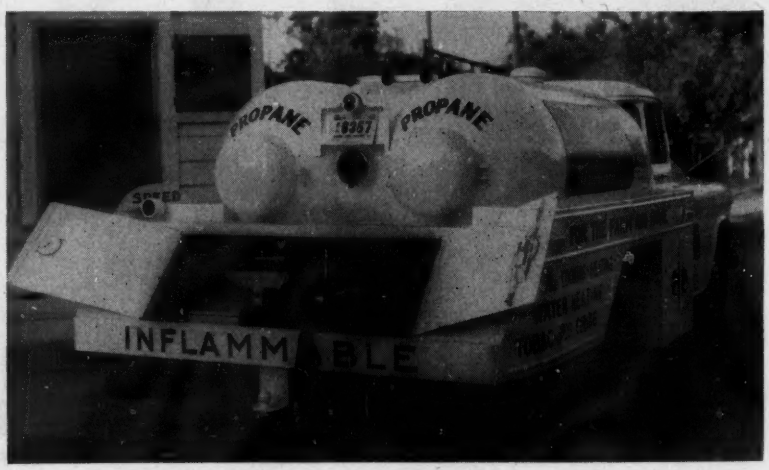
Fenstamacher Adds "Hot Shot" for Emergency Delivery and House Trailer Service

BEING a former boilermaker is a definite asset to H. V. Fenstamacher, owner of Fenstamacher's Gas Co. of Sanford, N. C., particularly when it comes to designing and purchasing bulk delivery trucks. Fenstamacher has a tremendous gas load during the tobacco curing season, so it occurred to Mr. Fenstamacher that a small "hot shot" type bulk delivery unit would be useful to take care of emergencies and small deliveries, such as trailer bottles when the regular large capacity bulk trucks were busy.

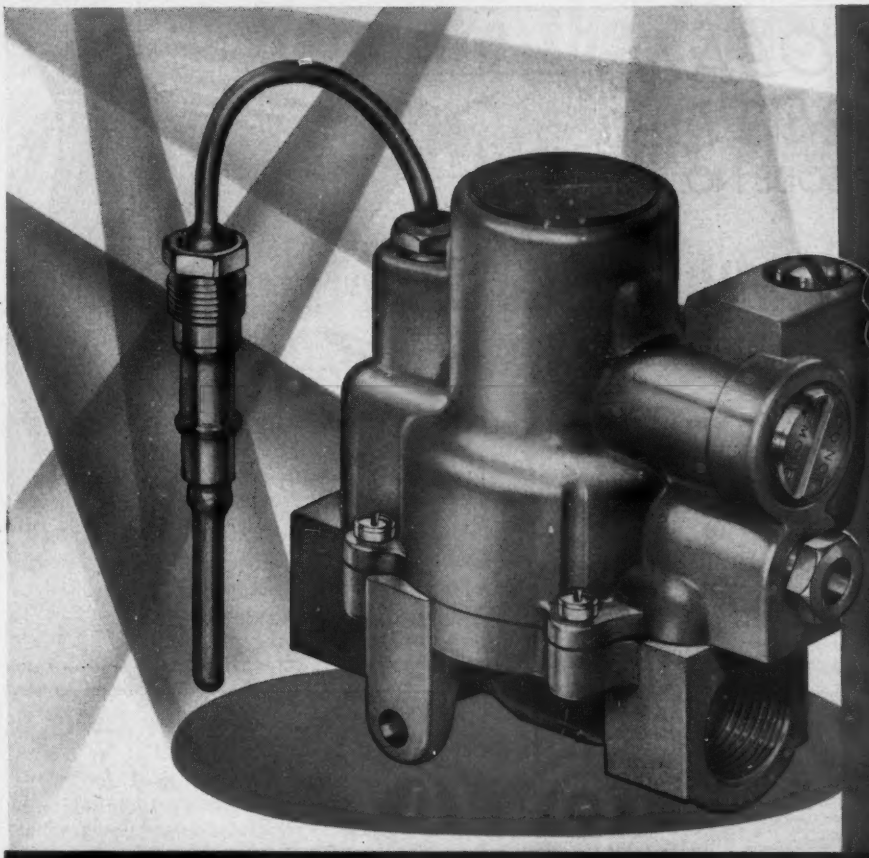
With the cooperation of W. N. Peacock Jr., chief engineer, and Ray L. Reedy, vice president of sales of Trinity Steel Co. Inc., a small delivery unit was designed and built and dubbed "Little Texas" by Mr. Fenstamacher. It incorporates accessories and equipment not found either in small units or in the larger bulk units. It will be a standard model.

The small 800-water gallon capacity twin unit is mounted on a 1-ton Chevrolet chassis of 134-in. wheelbase, the load is perfectly balanced when the tank is full. Deluxe accessories include a double Hannay electric hose reel mounted in the rear with 75 ft of the new Hewitt-Robbins dual filler and vapor hose, which is moulded together as one piece in ¾-in. filler and ½-in. vapor; a completely enclosed Fairbanks scale for bottle weighing, with all controls vacuum cylinder actuated on a remote control panel located near a Neptune Printometer, which is also located in the rear compartment, which is well lighted for night delivery; remote control Okadee valves which must be closed every time the compartment doors are closed, thus making it impossible for main tank valves to be left open as long as the compartment doors are closed; a reversible power takeoff so that a customer's tank might be evacuated, utilizing the chassis pump or in the case where emergency might exist, the truck tank unit might be loaded with its own pump. The entire unit acts as a traveling signboard for Mr. Fenstamacher as the chassis and tanks are painted gleaming white with the firm name painted in bright colors as an attention getter. ■

BPN field report



The "Hot shot" truck can fill any consumer storage from a trailer cylinder up to an emergency dump in a large industrial tank.



NEW BASO RANGE VALVE NO. 815G

- SAFE LIGHTING, no gas can reach the oven burner during the resetting cycle.
- INDEPENDENT OF OVEN THERMOSTAT in operation and service.
- COMPLETE SHUT-OFF of pilot and oven burner gas if the pilot should go out.
- PILOT GAS DRAWN FROM THE MANIFOLD upstream of the oven thermostat.
- BUILT-IN PILOT ADJUSTMENT for precise control of pilot gas.

THIS NEW BASO® RANGE VALVE CAN DO IT...

provide fully proven pilot protection for your line of gas ranges!

This is now assured with the New Baso Valve No. 815G.

Consider the many sound features provided by this new valve which add measurably to the value and sales appeal of your line of gas ranges.

- LARGE, COMFORTABLE RESET BUTTON for easy resetting.
- STRAIGHT THROUGH BODY DESIGN.
- THERMOELECTRIC OPERATION, the time-proved Baso reliability.
- CHOICE OF INLET AND OUTLET TAPPINGS, 3/8" F.P.T. or 7/16" compression coupling.
- TWO MOUNTING LUGS drilled for 3/16" bolt for secure attachment to range.
- STANDARD THERMOCOUPLE No. 88E Type.

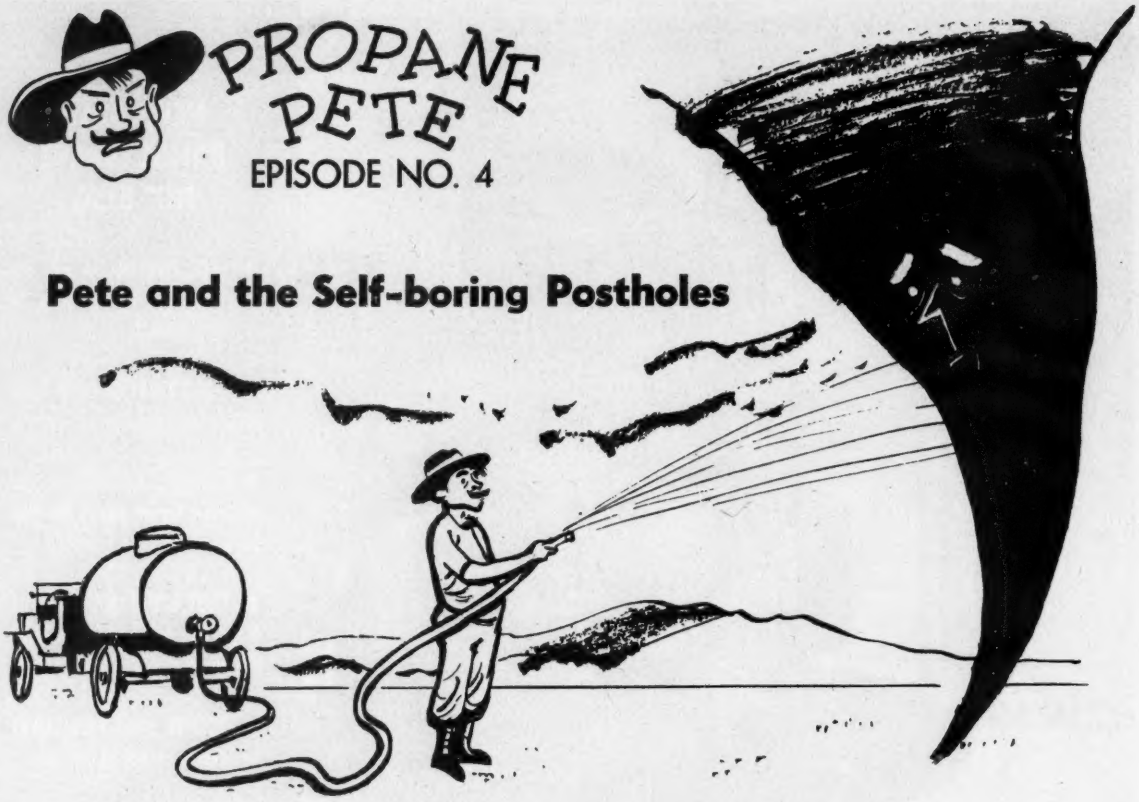
MILWAUKEE GAS SPECIALTY CO.
Dept. SB-6, MILWAUKEE 1, WISCONSIN

Write for Complete Information

PROPANE PETE

EPISODE NO. 4

Pete and the Self-boring Postholes



By J. Arthur Thompson

WHEN Propane Pete came rollin' down out of Wyoming, the weather turned sort of warm and sultry. Pete and his old truck, Beepee, just ambled along enjoyin' themselves and takin' their time. The country in northern Colorado just weren't too well settled in them days and roads weren't much. Beepee broke down a time or two, but Pete patched it up with barbed wire and some rough-cut eatin' tobacco.

He got over into the eastern part of Colorado and one Saturday rolled into a little town over a back road. He pulled into the main street, but there wasn't a soul in sight except one small boy sittin' mournful like on the board walk in front of the barber shop.

"Hey, son," Pete called, "what town is this?"

When the boy saw the truck, old Beepee, his mouth fell open and he stared and swallowed. "Burlington," he managed to answer, politely enough.

"Where is everybody?" Pete asked.

The boy's face dropped. "Out to the Sunday School picnic," the lad answered.

"Why ain't you there?"

"Dad couldn't bring me in and I had to walk to town. When I got here, everybody had gone and I hurt my foot, so I can't walk on it," was the almost tearful reply.

Pete had had a bath up in Thermopolis, Wyo., and he was feeling remarkably good and pious.

"Well, you just hop in old Beepee here," Pete told the boy. "You show me the way and we'll both go to the picnic. What's your name, son?"

"Name's Morrow. A. B. Mŏrrow, they call me," was the reply from the boy as he limped over and crawled into the cab.

Here was an audience that couldn't get away, so Propane Pete just filled that boy's ears full of all the advantages and virtues of L. P. gas as they drove out to the picnic grounds. Well, sir, Pete was so eloquent and convincing that the boy never forgot it. As he grew up, the

town of Burlington did too. And first chance he had he got right into the L. P. gas business. And A. B. Morrow is sellin' L. P. gas and all that goes with it to the folks around Burlington, Colo., right now.

But let's get back to the picnic.

Pete and A. B. got out to the grounds just as the women folks was lookin' around for some fuel to make coffee.

Here are the features your next delivery unit should have..

AND ONLY AMERICAN GIVES THEM TO YOU

A Custom Unit at Lowest Cost

New super-safe plumbing system increases pumping capacity . . . makes delivery faster . . . saves time and money.

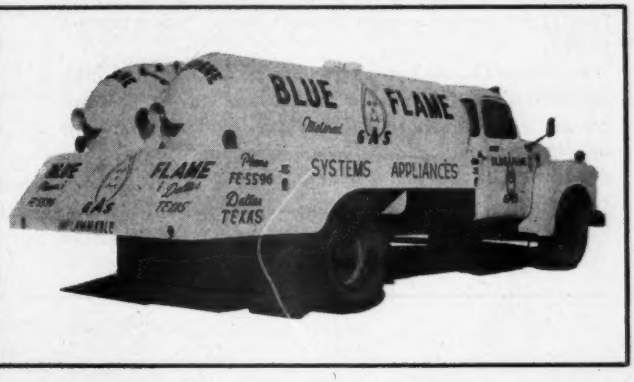
Tanks are locked to truck. Positively won't slip forward . . . a great driver-protection feature in case of accident.

Best balanced units on the road. American delivery units save wear and tear on trucks, give greater safety.

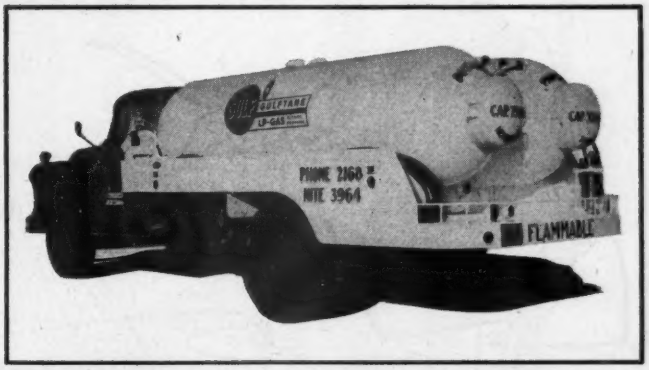
Motor fuel tank and meter mounted in rear . . . can't be side-swiped or sheared off . . . another American safety feature.

Quick changeover . . . when your long lasting American tanks are ready for a new truck, they can be changed over in just a few minutes . . . another American plus.

Good Looks . . . American delivery units are streamlined and good-looking . . . give you the extra safety you need with the smart appearance you want.



Deluxe Model N17. A completely enclosed, compact unit designed with all controls, motor fuel tank, meter, hose reel, power take-off and clutch controls in rear cabinet. Particularly desirable for dealers in northern areas . . . keeps all controls and equipment clean, fully protected from snow, ice or rain.



Deluxe Model B21. Fuel tank and fire extinguisher located in rear . . . meter and hose on catwalk next to driver. Also available with fuel tank, clutch, power take-off and hose reel in rear.

FINANCING AVAILABLE—Write for Information

HEADQUARTERS FOR THE LP GAS DEALER
1 order • 1 shipment • 1 invoice

Telephone STerling 4916

American Tank

AND MANUFACTURING COMPANY INC.

2136 WEST COMMERCE STREET • BOX 5525 • DALLAS 22, TEXAS

ALSO AVAILABLE AT:

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P. O. Box 2563
Highway 80 East, Phone 3-8726

P. O. Box 1555
North Miami, Fla.

Littlefield, Texas
306 N. Ripley
P. O. Box 689, Phone 228 MX

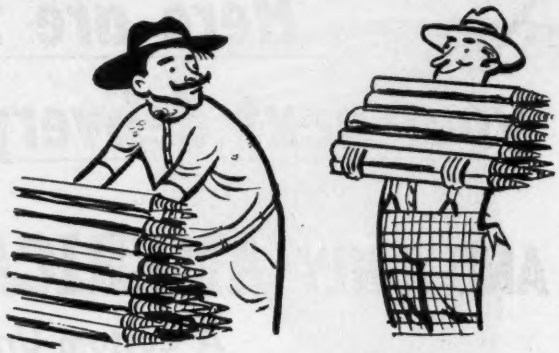
Here was a situation just made to order for Propane Pete. It was a hot, sultry day, so Pete up and declares they shan't cook their coffee over a hot, smoky fire. He rigs up a stove of sorts and with the clean, blue flame of L. P. gas he makes coffee for the whole picnic, before the folks could have gathered the wood.

After dinner, Pete expounds and talks so much about all the good points of L. P. gas that finally the preacher has to shut him off, so the county judge can make a speech.

No one knows just what the judge was goin' to say, for about that time someone noticed it was gettin' dark. They looked around, and here comes a great big, swirlin' black cloud. A long, snakey, twistin' funnel dipped down from it and headed right for the picnic. There was no time to run. Death looked certain for everybody. A few started to pray.

Pete didn't know how to pray, so he did the only thing he could figure on the spur of the moment. He grabbed his trusty propane hose and squirted liquid propane right up and down that cyclone funnel. He stopped the cyclone dead in its tracks, just a-hangin' there.

As you can well imagine, Pete was the hero of the day. Folks shouted his praises, pounded him on the back and



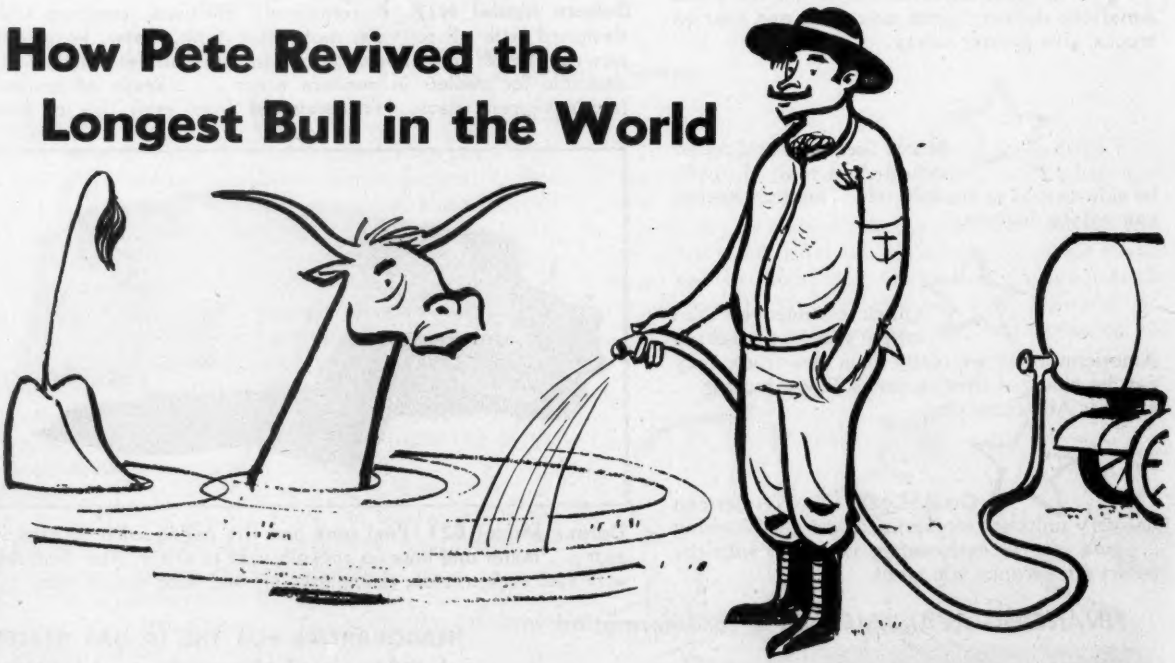
filled him full of fried chicken and devil's food cake. But everybody was mighty uneasy about what was going to happen when that cyclone come unfrozen.

Pete was pretty uneasy, too. Besides, he'd used the last of his gas and he didn't have a cent of cash left. He did some fast thinking.

He climbed up that funnel, broke it off from the cloud and dropped it to the ground. He borrowed a saw, then sawed that frozen cyclone up into short lengths and sold them to the farmers for self-boring postholes. ■

EPISODE NO. 5

How Pete Revived the Longest Bull in the World



PROPANE PETE had been stickin' around his home base for quite a spell and his feet began to git itchy. He figured it was time for him to go out and convert some more folks to all the advantages and glories of L. P. gas. So he loads up his old truck, Beepee, with plenty of propane and heads out.

Now down in the great state of Texas there are a lot of wide open spaces and if you see somebody in trouble, you just naturally stop and see if you can help out.

Pete was barrelin' along a back road somewhere around Plainview, Texas, and he rolled across a rickety bridge over a dry creek. Just as he got across, he noticed a couple of small boys standin' beside the creek. They was cryin' like their hearts would break.

Give your sales a boost . . .

Give your customers the best . . .

SCAIFE LIFT TRUCK CYLINDERS

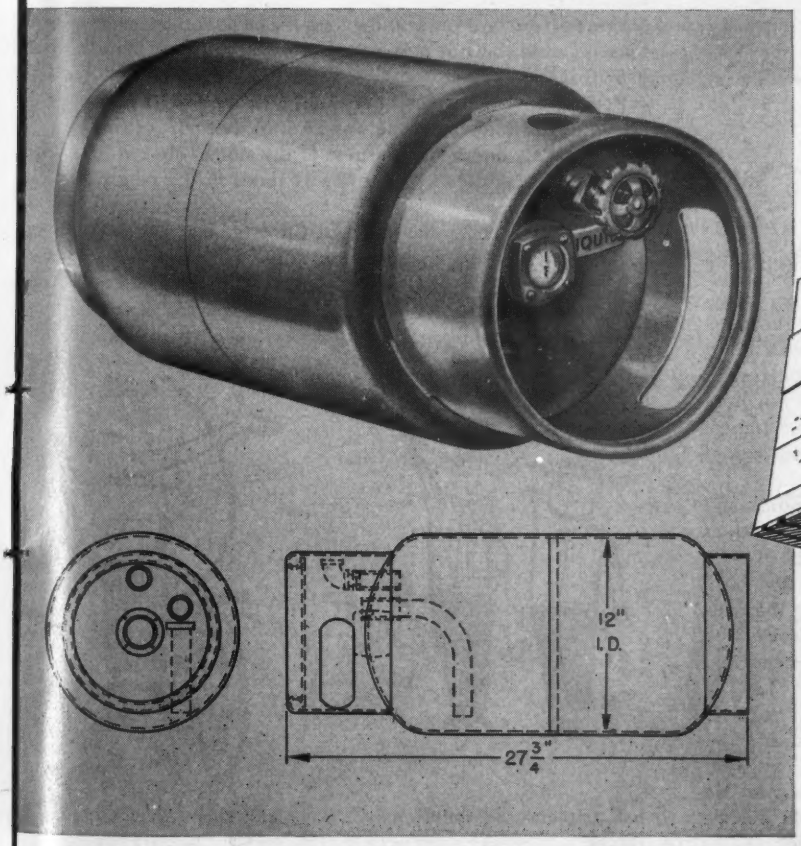
Scaife LP-Gas tanks for fork lift trucks can help you take advantage of the newest opportunity to boost your LP-Gas sales. If you want to start out on the right foot by servicing the market with a dependable line of removable lift truck cylinders, you'll find Scaife Company offers you the assurance of top quality and sound product design.

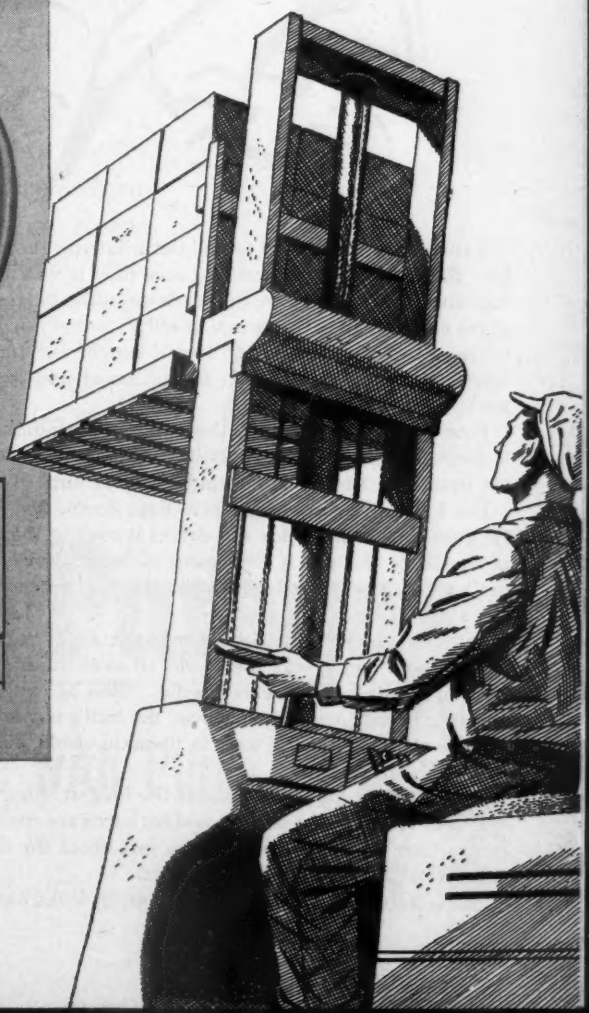
Scaife Fork Lift truck cylinders are produced by an organization that specializes in the manufacture of pressure vessels for air, liquids and gases. Only the highest quality materials . . . particularly suited for this specialized use of LP-Gas are specified. Every unit complies with the ICC code and each unit is subjected to rigid quality control practices, including a hydrostatic test for structural soundness and an air test for gas tightness before it leaves the plant.

Scaife designs have been developed to efficiently meet the requirements of lift truck manufacturers.

Check these advantages and you'll see why Scaife fork lift truck cylinders are your best bet in this new industrial truck market for LP-Gas.

- Neat, lightweight, high strength, 2-cup construction.
- Easy to read ICC data stamped on rugged Valve Protection Ring.
- Quality Controlled through every step of production . . . rigidly tested and inspected.
- Three standard sizes available . . . (20, 34 and 44 pound capacity propane).
- Careful arrangement of valves and fittings to assure easiest possible servicing.





FOUNDED 1902

SCAIFE COMPANY

OAKMONT (PITTSBURGH DISTRICT) PENNA.

MAKERS OF PRESSURE VESSELS AND DRAWN SHAPES

SALES OFFICES: GENEVA, ILL., ATLANTA, GA., RIDGEWOOD, N.J., OAKMONT, PA.

Naturally, Pete stopped to find out what was the trouble. He walks over to them and sees they is watchin' a big rangy bull that is mired clear down in the quicksand of the creek. The boys manage to tell Pete that this here is their very own bull which they'd caught and tamed. And here he is, mired down in quicksand and sinkin' lower by the minute.

Pete tried to walk out to the bull but the quicksand is so treacherous that he sinks in almost to his knees at the first step. He just barely pulls himself out.

But Pete ain't goin' to let them boys down. Not him! He goes back to his truck and drives it over to the edge of the bank and gits a long piece of barbed wire. He can't throw the barbed wire over the bull's head and he's stopped again.

Pete relies on propane for most everything, so he hauls out the hose and sprays the liquid all over the sand in front of the bull and freezes it solid. Then he can walk out over it and loop the wire over the bull's horns. He ties the other end of the wire to the axle of old Beepee and drags out the bull.

Well, sir, that bull is just about the longest thing you ever see. He's only got one eye and his horns are crooked. But to them two little boys he was just about the finest bull that ever ambled over the range.

The bull just lay there on the bank and it looks like it's too late for him to come out of it. Pete quizzes the boys. They tell him that their name is Newman, Lyman and Joe Newman. They'd caught this maverick bull and tamed him enough so they could ride him. He was so long that they called him "Consolidated," as that was the longest word they knew at the time.

It seems that a close neighbor, just 17 miles over the hill, had promised them two bits, cash money, if they'd bring over this here long bull of theirs and have him service one of his cows. The boys had driven an extra bargain that if the cow had more than one calf, they would get the extra.

Now they were stuck. They wouldn't get the two bits and it looked like they was goin' to lose their bull, Consolidated, too. They sobbed some more.

Pete was mighty tender hearted as far as kids are concerned and he just couldn't see them feelin' so bad. He weren't no vetinary and didn't have much of an idea what should be done.

Finally he did the only thing he could think of. He squirted a big shot of propane down that bull's throat. He never could figure for sure just what did happen. But apparently that bull had swallowed a couple of flint rocks and they were rubbin' together in one of his stomachs, makin' sparks. At any rate, that bull got hot all of a sudden. He jumped to his feet and let out a bellow you could hear a mile.

The boys made a jump and got on his back and the bull took off over the hill at a dead run, lookin' like a long brown streak.

Pete scratched his head and finally drove on. It was about a year later before he was back in that part of the country again and heard the rest of the story. That bull took just 17 minutes to make the 17 miles to the neighbor's ranch.

When the rancher heard about the troubles that Joe and Lyman had had, he let the bull service five cows, and paid for all five at two bits a head, so the boys had a dollar and a quarter cash in their jeans. But the payoff came a number of months later—every one of them cows

had triplets and the Newman boys had themselves 10 calves.

And that's how the Newman's got their start to go into the L. P. gas business. In honor of that old, one-eyed bull, they named their business the Consolidated Gas & Equipment Co. of America. And at last reports, they was doin' pretty fair. ■

Because Puregas is *moisture free* it won't freeze in even the coldest weather. Means you and your customers can forget about annoying storage tank freeze-ups. Keeps them happy . . . keeps you in business!

And Puregas deliveries are *on time, every time* because Pure maintains its own fleet of tank cars that travel in any weather.

So be *sure*. Get your LP-Gas from Pure!

Puregas

Be sure with Pure

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Now eight sources of supply: The Pure Oil Company, 35 East Wacker Drive, Chicago 1, Illinois • Tampa, Florida, Box 1630 • Lubbock, Texas, 4205B 36th Street • Houston, Texas, Box 239 • Worland, Wyoming, Box 38 • Minneapolis, Minnesota, 1306 South First Street • Denver, Colorado, 514 Farmers Union Life Insurance Building.

NEWS

News and news notes about the activities of manufacturers, distributors and dealers.

Interior of recently completed heater assembly building of the Western Heater & Tank division of John Wood Co. in Chicago.

John Wood Heater Assembly Building in Operation

The Western Heater & Tank division of the John Wood Co., Chicago, recently completed construction of a new heater assembly building. The new building is 80 ft by 30 ft with 20-ft clearance under truss.

Heater tanks fabricated in the present building are delivered to three electric unloading stations in the new building by means of a 1150-ft monorail conveyor, which travels through an underground tunnel under railroad tracks and roadway crossings.

A paint storage vault has been constructed at the east end of the new building for storing of paints, thinners and enamels.

New Georgia Company to Manufacture LPG Tanks

A group of well-known LPG men has organized the Superior Tank Corp. in Tucker, Ga., to fabricate domestic and industrial tanks for the L. P. gas and anhydrous ammonia industries.

Heading the new company as president is Fred A. Henninger, who, since 1946, has been head of Charlotte Tank Co. Inc. An active member of the national association, Mr. Henninger entered the tank manufacturing business in 1936. He was instrumental in devising designs of systems and tank trucks for the next several years. Following World War II he helped establish the engineering department of Anchor Petroleum Co. He will be responsible for procurement, design and manufacturing at Superior Tank.

Fred A. Rives, as vice president, secretary, and treasurer of the new company, will handle sales and customer contacts. Mr. Rives' 15 years in the LPG industry were spent in Georgia, where he was associated with Automatic Gas Co. of Columbus, serving as president from 1944 until 1952, when the company became part of the Consolidated Gas Co. Until Jan. 1 of this year he was executive vice president. Mr. Rives was instrumental in setting up the Gas Fuel Technology course for L. P. gas at Southern Technical Institute, was president of the state association of Georgia, and for the past eight years has been a member of the board of directors of the LPGA.

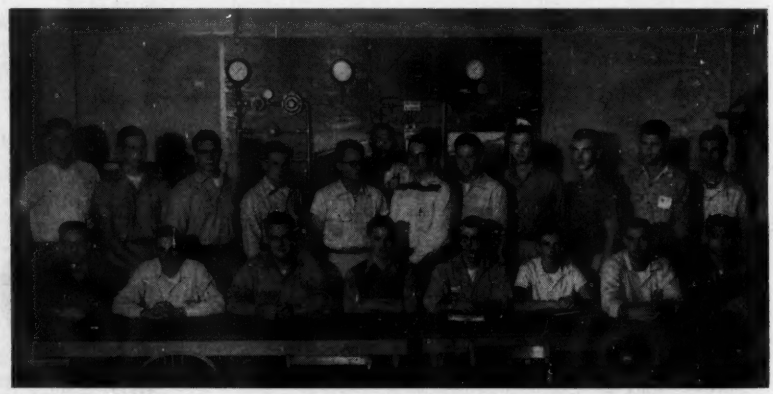
Victor T. Mavity, vice president of Superior Tank and a member of the board, organized his own LPG company in Dothan, Ala. in 1932.

C. Dexter Jordan is also a vice president and director of Superior Tank. Formerly he was vice president and director of the Automatic Gas Co. and a member of the board of Consolidated Gas Co.

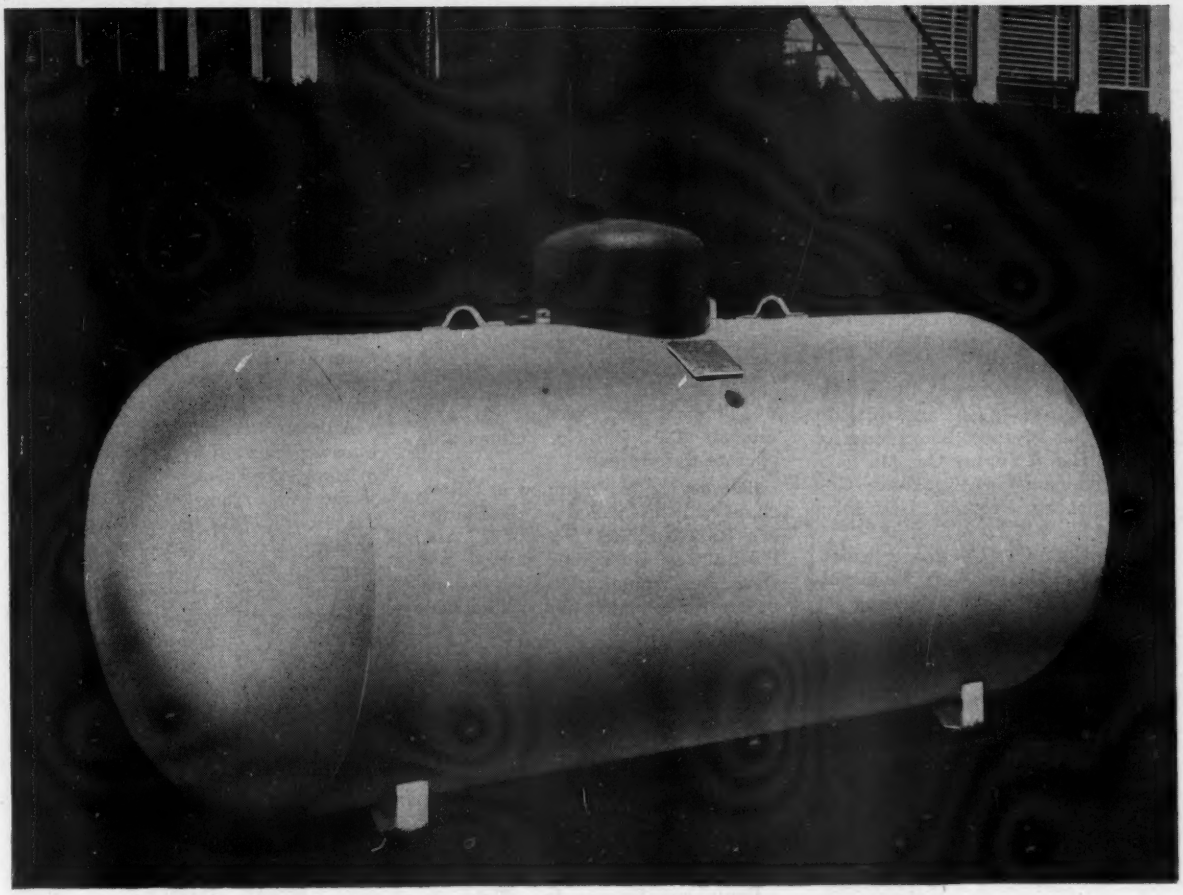
Equipment Book Issued by GAMA Industrial Division

The 1955 edition of "A List of Gas Equipment for Industrial Uses" has just been issued by the Industrial Gas Equipment Division of the Gas Appliance Manufacturers Association.

This fourth edition is divided into three sections . The first section lists the names and addresses of the various manufacturers of industrial gas equipment and the particular products of eaeh company. The second section lists alphabetically gas equipment and accessories followed by the names of the companies that makes each one of these products. The third section lists the various trade names



Twenty new students enroll for Gas Fuel Technology course at Southern Technical Institute. Front row (left to right): Harry M. Zagger, Savannah, Ga.; William J. Payne, Chamblee, Ga.; Mark L. Vorce, Weyerhauser, Wisc.; Franklin E. Muggridge, Cairo, Ga.; John S. Carr, Groton, S. D.; Barry Costenbader, Schylkill Haven, Pa.; Charles Johnston, Atlanta, Ga.; Fred A. Downs, Winton, N. C.. Back row (left to right): Danny R. Lane, Kellogg, Idaho; Raymond Maddox, Fitzgerald, Ga.; James T. Ceman, Berlin, Wisc.; Robert Spinicci, Swoyerville, Pa.; Claude B. Gray, East Point, Ga.; John S. Reynolds, Tulsa, Okla.; Ernest Albitz, East Greenville, Pa.; Bobby J. Nivens, Pompano Beach, Florida; Joe G. Williams, Huntland, Tenn.; Bill Clarenbach, Roseburg, Oregon; Jack Amos, Bradenton, Florida; Roy Graybeal, Fort Worth, Texas.



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Now...when competition is tougher than ever before ...here's your chance to give your customers something extra in terms of DEPENDABILITY, SAFETY and SERVICE. There's no better way to build happy customer relationships and new business than with acf "First-in-Quality" Tanks.

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Complete Stress Relieving eliminates stresses set up during forming and welding...restores resistance to failures caused by temperature changes or pulsating loads.

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Hartford Steam Boiler Inspection in accordance with ASME 1952 W-XR-SR and Underwriters' Laboratory Approved.

Steel Grit-Blasting of tank exteriors to remove mill scale, resulting in smooth surface for finest primer.

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under which products are sold and the company that makes them.

Copies of the booklet may be obtained for $1 each from GAMA, 60 E. 42nd St., New York 17, N. Y.

Kengas Extends Operations To 16 Kentucky Counties

With the acquisition of three additional L. P. gas operations, Kengas Inc., a wholly owned subsidiary of Western Kentucky Gas Co., has extended its operations to 16 counties in western Kentucky.

Included in the recent purchases were the Sure Gas Co., Owensboro; National Gas & Supply Inc., Paducah; National Gas & Supply Co., Marion; and Henderson Gas Appliance Co. and Kentucky Propane Gas Inc., Henderson.

The Airlene Gas Co. properties at Paducah and Murray were the initial operations acquired by Kengas in June. The six Kengas properties now serve 12,000 customers and employ 75 people. Annual deliveries total 6 million gal. of L. P. gas.

Kengas is headed by W. T. Stevenson, president; J. L. Bugg, vice president; D. L. Ellis Jr., treasurer; and Priscilla Head, secretary. J. L. Fietze has joined the company as general manager. He was formerly district manager for Suburban Propane Corp. and had been vice president and general manager of Fuelite Corp.

New Minnesota Plant After Diversified Markets

Centrally located in a rapidly growing suburban area is the Propane division of Kossow Oils Inc., Minneapolis. The company, which went into operation on Aug. 1, has storage capacity totaling 30,000 gal.

The company plans to push diversified applications of the fuel, such as carburetion, industrial, and agricultural uses and, according to Manager Clyde N. Ryberg's estimate, expects to have an estimated 2500 bulk customers within a three-year period. At present the company operates within a 20-mile radius.

Equipment includes an International R-170 truck, which will soon be converted to LPG, and an 1800-w.c. truck tank.

Alabama to Be Site of LPG Chalk Storage Cavity

Plans have been announced for an 8.5 million gal. underground storage cavity for LPG to be owned jointly by Tuloma Gas Products Co. and Sinclair Oil & Gas Co. Tuloma will operate the project.

The cavity, to be mined in Selma chalk, will be located on the Southern Railroad near Demopolis, Ala. Preliminary work was started last December. Actual mining operations began in September and it is expected that the cavity will be ready for storage by May 1956.

The main shaft will be drilled to a depth of 300 ft and set with 42-in. casing. Drilling of the shaft is expected to take about 60 days. At 300 ft, storage tunnels will be mined laterally from the bottom depth of the shaft throughout the surrounding area. Some 50,000 yards of chalk will be removed from the complete cavity.

Fenix and Scisson Inc., Tulsa, is the general contractor for the project.

"This is a conservation project for the storage of product during the summer, when the demand is comparatively low," remarked officials of the two Tulsa companies. "Deliveries will then be made direct from the cavity during the peak demands of winter, eliminating the long transit shipments from production points in the southwest and mid-continent areas."

Company officials stated, "To our knowledge, this is the first underground storage cavity to be mined in chalk." Tuloma and Sinclair currently have liquid hydrocarbons stored in underground cavities washed out of salt beds, or salt domes, and in caverns mined from hard rock. The Alabama site was selected after much surface geological work had been conducted and extensive tests made on core samples taken from wells drilled throughout the area.

Because of the large volume of propane to be stored, it is more economical to install and maintain underground facilities than to store the product in pressure tanks aboveground.

Although some L. P. gas is stored in caverns mined in shale, limestone, or some other rock formation, or injected into oil, gas and water sands, the major part of the stored product underground is found in cavities formed in salt beds, or salt domes.

Today there are more than 170 underground storage facilities in use with a total capacity of more than 670 million gal. of L. P. gas. Most of this product is stored in cavities in the salt beds and salt domes underlying the producing areas of Texas, Louisiana, Mississippi, Oklahoma, New Mexico and Kansas.

In a mined cavity, such as the Tuloma-Sinclair project, the LPG is injected into the mined-out cavern. It remains in storage until time for shipment. The specification product is then pumped out of the cavity with bottom-hole pumps into tank cars and tank trucks for shipment to distribution points throughout the southeast area.

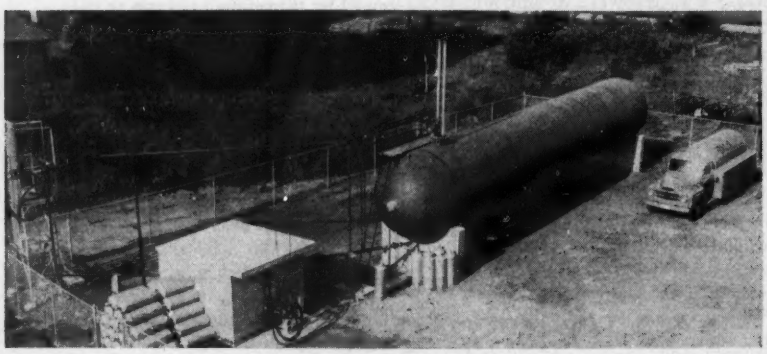
Heating Equipment, Range Shipments Still Rising

Shipments of gas ranges and of three categories of gas central heating equipment continued to gain during September.

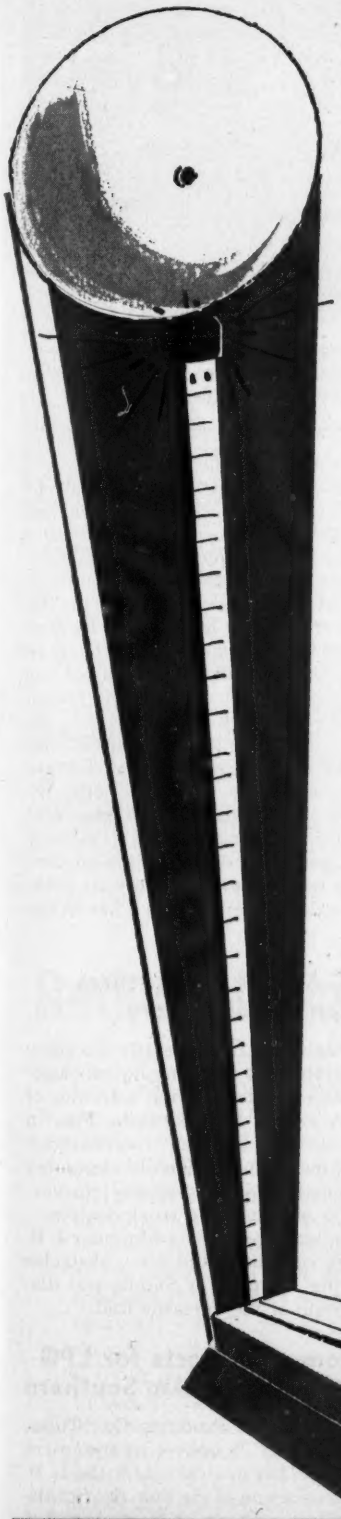
GAMA reports that in September 231,300 ranges were shipped, compared to 203,900 sent out last September. This is a 13.4% increase, and brings to 1,740,400 the number of ranges shipped during the first nine months of the year. To date, the year's increase is 15.5%.

GAMA also reports that September saw a new record set when 100,200 gas-fired warm air furnace units were shipped. This is an increase of 22.2% over the same month last year. Shipments for the first nine months of the year were 614,000, a 32.8% increase over 1954.

Gas-fired boiler shipments also set a September record of 14,600 units, up 22.7% over last September and brought to 63,900 the number shipped



Recently installed bulk plant of the propane division of Kossow Oils in Minneapolis. Company will stress industrial and agricultural applications of the fuel.



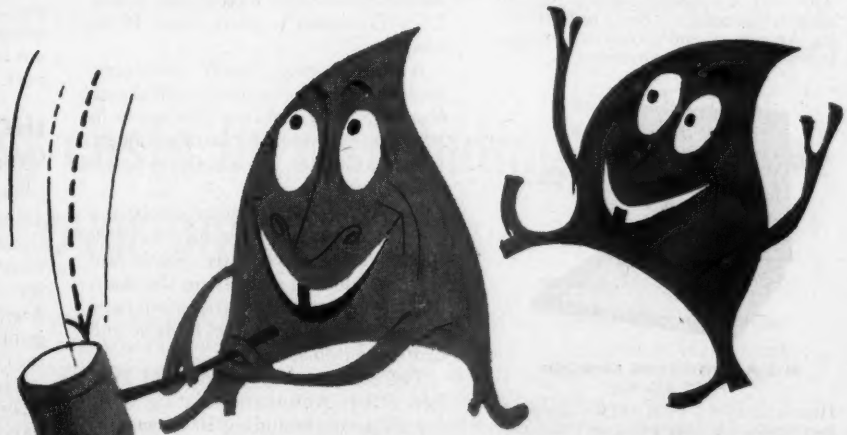
SALES ZOOM AS AMERICA SWITCHES TO RHEEMGLAS

Rheem is really rolling. Sales climb to all-time high!

The new Rheemglas Water Heater is the best selling, most profitable line of its kind in the United States today. So report hundreds of enthusiastic Rheem dealers.

Here's why: A great new product . . . powerful national advertising . . . wonderful public acceptance. Rheem dealers are taking advantage of this unbeatable combination to roll up record-breaking sales —and profits—throughout the country.

No doubt about it. The big switch today is the switch to Rheemglas. The reason is more profit for dealers. That's why we think you will be on the right track if you Switch-in-Time, Switch to Rheem.



Switch-in-Time Switch to Rheem

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This Mask's proved protection, wearing comfort, and durability make it the No. 1 choice in any job where ammonia is a breathing threat. "All-Vision" Facepiece protects entire face. Large lenses permit maximum job vision, and will not "fog up." U.S. Bureau of Mines Approved. A complete line of masks for other refrigerants, self-contained Breathing Apparatus, and protective clothing is available. Write for bulletins.

M·S·A ANHYDROUS AMMONIA FIRST AID KIT

Here is an *all-new* First Aid Kit designed specifically for fast, effective treatment of ammonia burns. Developed on the recommendations of users of anhydrous ammonia, the new kit contains a complete assortment of treatments and dressings. A special instruction sheet provides users with proper first aid methods.

The case is of "all-weather" construction, 20 gauge steel, finished in durable, blue baked enamel. A rubber gasket seals out dust, moisture. Mounting brackets permit attaching to wall.

Be prepared for emergencies . . . write for details

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SAFETY EQUIPMENT HEADQUARTERS

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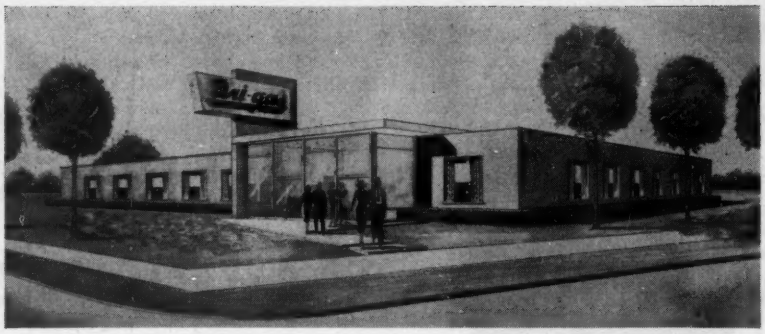


Architectural drawing of Dri-Gas Co.'s new office building being constructed on U. S. Highway 34 in Hinsdale, Ill. The contemporary air-conditioned building will feature a pink-brick exterior. The Dri-Gas sign, supported by a center pillion, will be visible for a considerable distance.

in the first nine months of 1955, a 13.1% increase over 1954.

Conversion burner shipments staged a strong comeback with shipments of 45,600 units to make it the biggest September on record as well as the biggest month of the year. However, the nine-month figure of 138,800 unit shipments is down 16.9% from last year.

Scaife Co. in Production on Home Heating Equipment

Timken Silent Automatic home heating equipment is now coming off a new production line at the Scaife Co.'s Oakmont plant, near Pittsburgh.

A. V. Murray, Scaife president, said the new operation will create approximately 300 new jobs early in 1956 when residential heating equipment production is expected to reach a high level.

The company is manufacturing consumer-used items for the first time. Until just recently, Scaife had concentrated its activity on the manufacture of movable and stationary liquid petroleum gas cylinders and ordnance items.

The company's production of Timken Silent Automatic heating units for all gases, including L. P. gas, includes forced circulation warm air furnaces, conversion gas burners and gas-fired boilers. Scaife will also produce air-conditioning equipment to be used in conjunction with gas residential furnaces.

Magic Chef Acquires Dortch Stove Works

Magic Chef Inc., St. Louis, has acquired the operating assets, trade names, tools, and facilities of the Dortch Stove Works, Franklin, Tenn. During the past 10 months, Magic Chef has sold its outmoded equipment and multiple-story plants and warehouses in Lorain, Ohio; Indianapolis, Ind.; and Harvey, Ill., laying the groundwork for the acquisition of the modern, more productive facilities found in the Dortch plant.

"The excellent location of the Dortch factory, as well as its fine manufacturing layout, is extremely important to Magic Chef's plans for expansion," stated Cecil M. Dunn, president of Magic Chef.

Set up as a new corporation, the Dortch Stove Works Inc. will operate independent of Magic Chef's St. Louis plant. Thomas F. Lance will continue as president and general manager of Dortch, and the corporation will serve and supply its present customers exactly as it has in the past.

IHC Magazine Features Green's Fuel History

"Fuel For All" is the title of a story describing the far flung liquefied petroleum gas distribution activities of Green's Fuel Inc., Sarasota, Fla., in the current issue of *International Trail* magazine, nationally circulated publication of International Harvester Co. and its motor truck dealers.

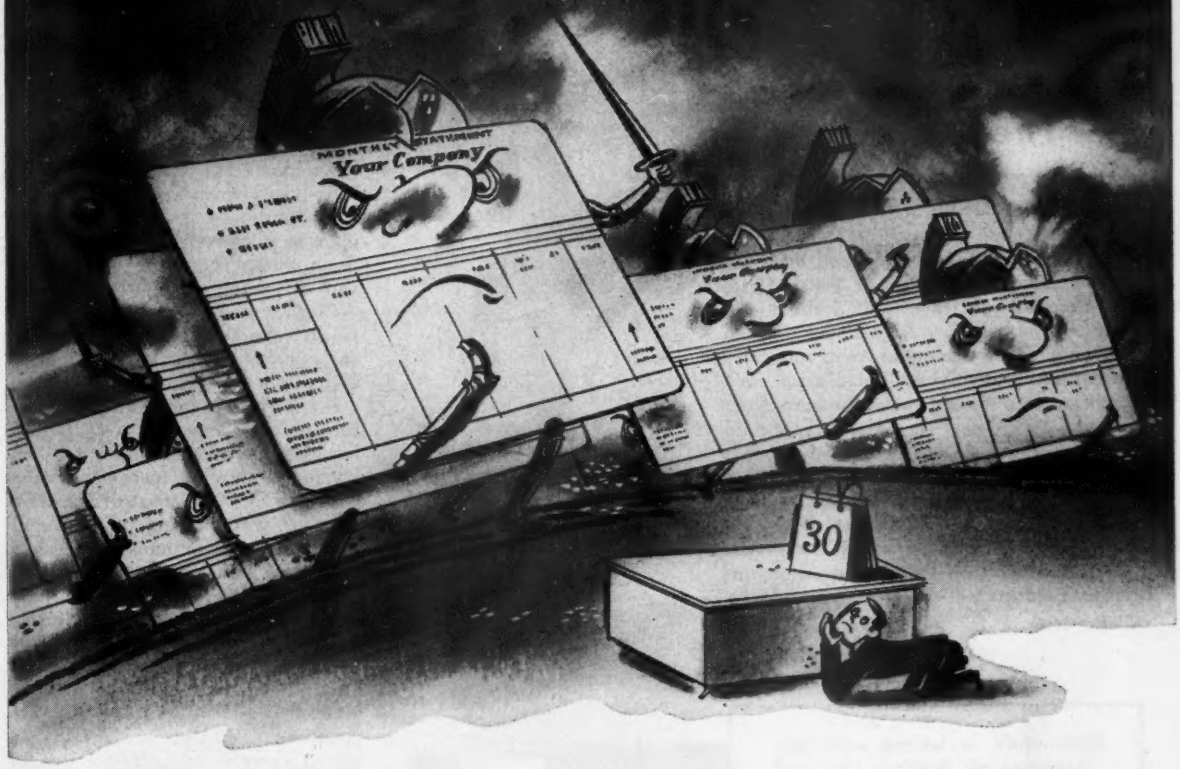
The story reveals how founder J. B. Green conquered the many obstacles barring the path to commercial distribution of the versatile fuel.

Tuloma Contracts for LPG Output of Pan-Am Southern

Tuloma Gas Products Co., Tulsa, marketer of liquefied petroleum products, has contracted for the L. P. gas production of the Pan-Am Southern Corp. refinery at Destrehan, La. R. A. Carter, Tuloma president, said that marketing operations began Oct. 1.

"The availability of L. P. gas from the Destrehan refinery provides us with greater flexibility in our nation-

DIVIDE and CONQUER with CYCLE BILLING



Reduce billing costs by distributing work load over entire month

Are you besieged by monthly statement preparation and month-end billing battles that rush you into costly overtime... burden you with hectic, error-producing fatigue... rob you of profitable collections?

Join forces with other firms who have effectively combated this monthly siege. Firms who disperse the cumulative onslaught of thousands of statements through Cycle Billing.

Cycle Billing deploys your statement load into smaller, workable groups. You then have the advantage of cycling these smaller groups into regular billing periods throughout the month. Instead of the usual month-end, 3 to 10 day "battle of the statements," you divide and conquer this formidable assault by tactical workaday routine. Each cycle of statements is quickly and easily encountered and secured in a single day.

What's more, Cycle Billing eliminates tedious and time-consuming individual postings... prepares statements and ledger in one operation... permits clerks to handle larger volume at one time... provides automatic trial balances.

Defend your profits against time and cost-consuming month-end statement preparation. KD763 documents the successful Cycle Billing offensive of one firm against the siege of month-end statement preparation. Read how the Coastal Butane Service, Summerville, South Carolina saved $9000 the first year — $6000 in every succeeding year. Write to Room 2252, 315 Fourth Avenue, New York 10, New York, for your *free* copy of the informative booklet KD763.

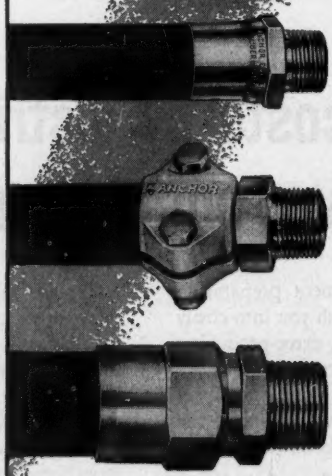
Remington Rand DIVISION OF SPERRY RAND CORPORATION

FOR LPG AND ANHYDROUS AMMONIA
THINK TWICE
ABOUT YOUR HOSE ASSEMBLIES

There's more than meets the eye!

It may not be fair to class Hose Assemblies as pedigreed or as mongrels — but, they certainly can't all be "bests", or 'firsts". That's why I suggest you THINK TWICE about your Hose Assemblies, Couplings and Fittings if you want real service out of them. Your safest bet is to present your original equipment applications to the engineers who have many years of "know-how" in design, production and application of Hose Assemblies—Anchor Engineers. Now, chances are that they can recommend just the right assemblies, the pedigree if you please, right from stock—a hose suited for your particular need. But if not, you can depend on their recommendation. Anchor Products will serve and serve. Write them today.

Andy Anchor



Meanwhile — let me send you literature on Anchor's LPG and Anhydrous Ammonia Hose Assemblies, Couplings and Fittings— *Bulletin No. 500.*

Also — Anchor *Pressed-On Assemblies, Adaptor Unions and Pipe Fittings, and *Reusable Couplings —*Bulletins Nos. 100, 200 and 300.*

*(Both for hydraulic — high, medium and low pressures.)

ANCHOR COUPLING CO. INC.
301 North Fourth St. • Libertyville, Illinois
Branch Offices: Dallas, Tex.; Plymouth, Mich.

wide marketing program," said Mr. Carter. "It will enable us to give much faster service to our many customers in the southeast and Gulf Coast areas."

Although tank car shipments are made direct from the refinery, truck loading and storage facilities, adjacent to the refinery, are owned and operated by Tuloma.

New California Plant To Be Built by Rockwell

Rockwell Manufacturing Co. will soon begin construction of a 100,000-sq ft warehouse, assembly, and repair plant at Porterville, Calif., according to an announcement by W. F. Rockwell Jr., president.

Company officials estimate the new plant, expected to be completed by early 1956, will cost approximately $1 million.

A one-story concrete and tile structure on a 32-acre plot will be used for assembly, repair and warehousing of Rockwell meter and valve products for west coast distribution, also for warehousing of Rockwell-built Delta power tools for western industries and home workshops.

Fifty to 100 people will be employed at the start, with employment ultimately expected to approach 200.

Like most new Rockwell facilities, according to Mr. Rockwell, the plant will be completely heated and air-conditioned with gas and will be designed along strictly functional lines. It will differ considerably from the others in outward appearance, however, in order to conform with the "futuristic trend of modern California style industrial architecture."

Petrolane Gas Service Inc. Acquires New Outlets

P. E. Foote, president of Petrolane Gas Service Inc., announces that his company has acquired the tank gas business of California-Pacific Utilities Co. in the vicinity of Baker and La Grande, Ore., and the stores, plants and businesses of Gas-Heat Inc., in Moscow, Orofino, Lewiston and Grangeville, Idaho.

These new outlets will be operated in conjunction with Petrolane's other business in that area.

New Canadian Meter Co. Milton Plant Completed

Canadian Meter Co. Ltd., Maple Leaf division of American Meter Co., has completed its new 38,000- sq ft head office and plant at Milton, Ontario.

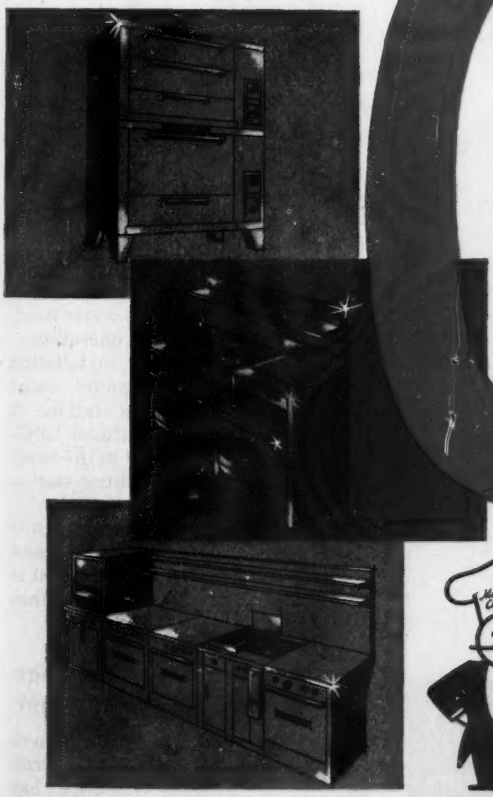
The expansion program of Cana-

for cooking performance and profit

there's

'Only One'

Magic Chef



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for complete information, catalogues and prices on MAGIC CHEF SUPER DUTY ranges—CAFE LINE ranges, broilers, fryers and bake ovens.

Magic Chef Inc., 1641 S. Kingshighway Blvd., St. Louis 10, Missouri

MAGIC CHEF GAS COMMERCIAL COOKING EQUIPMENT

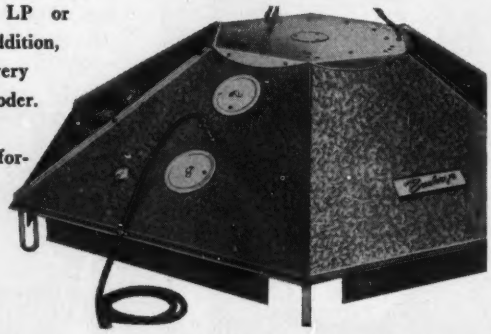
EXPAND
your gas market... With Buckeye GAS BROODERS

A simple check of the number of poultry raisers in your area will be a good indication of how you can expand your gas market and at the same time build goodwill with customers. Broiler growers use gas brooders for raising baby chicks to the market stage. Egg producers use gas brooders for raising flock replacement birds.

In either case Buckeye Gas Brooders, well-known throughout the poultry industry, will give you a good chance to expand your present LP or "Bottled Gas" market. In addition, there is a profit for you every time you sell a Buckeye Brooder.

Write today for complete information. Other gas dealers have profited by handling the Buckeye line and we're sure you can too.

3-72P SUN-TEMP RADIANT GAS BROODER with 72" canopy for healthier chicks, cleaner heat with less work.



4-96P NEW SENIOR GAS BROODER with 96" canopy, simple assembly and operation features.

Our New Brooder Catalog No. 55-A is now available. Send for your free copy today. No obligation, of course.

THE Buckeye INCUBATOR COMPANY
Springfield, Ohio
WESTERN OFFICE and WAREHOUSE FRESNO, CALIFORNIA

STANDARD OF PERFECTION IN THE POULTRY INDUSTRY

dian Meter is geared to the rapid development of the gas and oil industries in Canada. The new facilities provide for greater displacement meter production, a meter-run fabrication department and service shops for displacement meters, orifice meters, control instruments and allied products. Expanded warehousing facilities are also incorporated.

One of the 15 bottle-filling plants operated by Davis & Harvey, South Shore, Ky., in the Portsmouth atomic plant area.

Davis & Harvey Operate 15 Bottle-Filling Units

One tank truck of the Davis & Harvey Gas Co. is kept busy servicing 15 bottle-filling units at as many trailer courts in the atomic area of Portsmouth, Ohio. These installations use 1000-gal. Butler tanks and Corken pumps, according to S. R. Harvey, of South Shore.

At two of the installations, two 1000-gal. tanks have been manifolded together and are operated with a Corken prefabricated No. 10 bottle filling unit. One of these units is at a government housing project that has 500 prefabs and 500 trailers, which are equipped with water heaters and ranges for LPG operation.

The other 2000-gal. installation serves a combination trailer court and large gasoline filling station. A 155,000 Btu Carrier overhead LPG-fired heating unit is used in the service department of the filling station to heat the office and rest rooms.

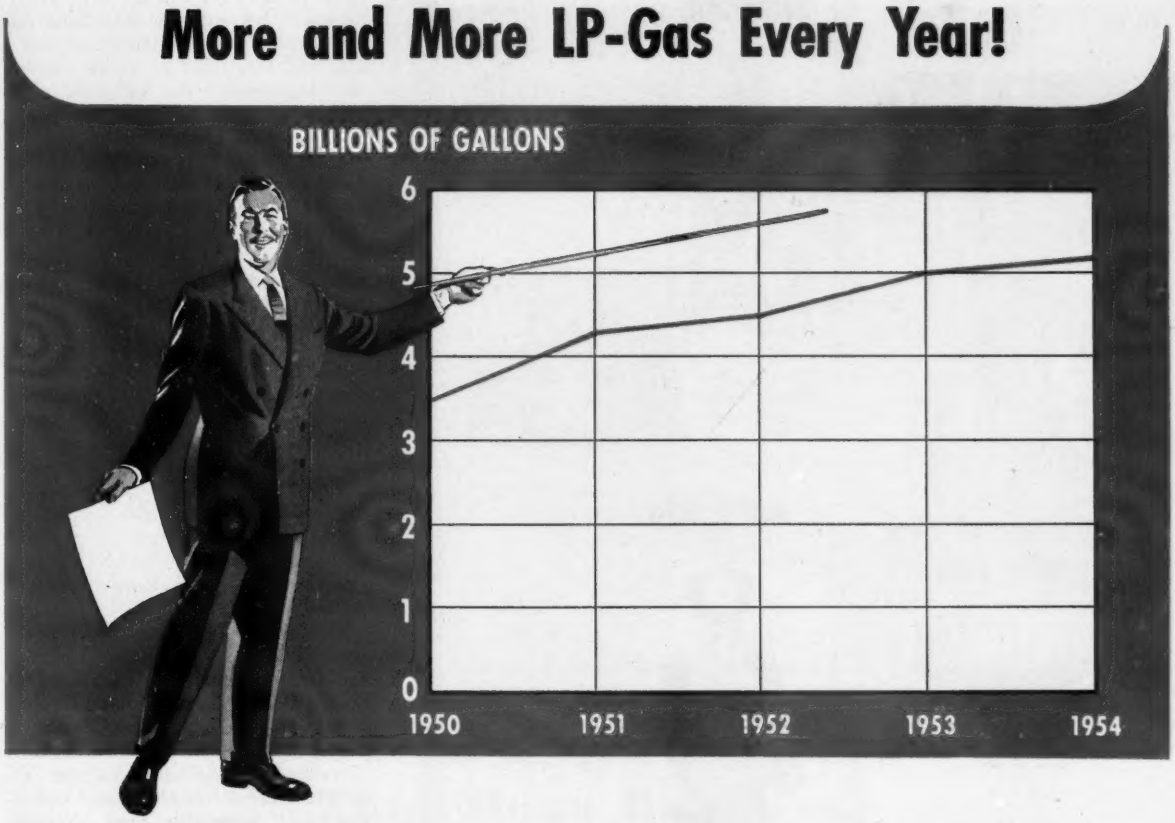
Gas is piped from the filling units to the community rest rooms and laundry rooms and offices where it is used to operate commercial clothes dryers and space heating units.

Mark J. Anton Jr. Becomes Suburban District Manager

The promotion of Mark J. Anton to manager of the Derby, Conn., district of Suburban Propane Gas Corp., has been announced.

"M.J." is the son of Sen. Mark An-

America Is Using More and More LP-Gas Every Year!



It's Performance That Counts

PHILGAS® Is America's Largest Selling Brand of LP-Gas!

When you do business with Phillips you get profit-making performance on 5 important points! 1. Philgas is a high quality product. You can count on it for purity, uniform pressures, high thermal content. 2. Phillips vast resources assure a dependable supply of Philgas, even in times of peak demand. 3. Phillips LP-Gas specialists are available to assist in designing and setting up your bulk plant. 4. Advertising and promotional material is supplied to tie-in with Philgas advertising. Philgas is the most advertised LP-Gas in America! 5. LP-Gas specialists advise Phillips contract customers on individual operational problems and keep them informed concerning improvements in equipment, marketing procedures and safety measures. Write for full information concerning Philgas.

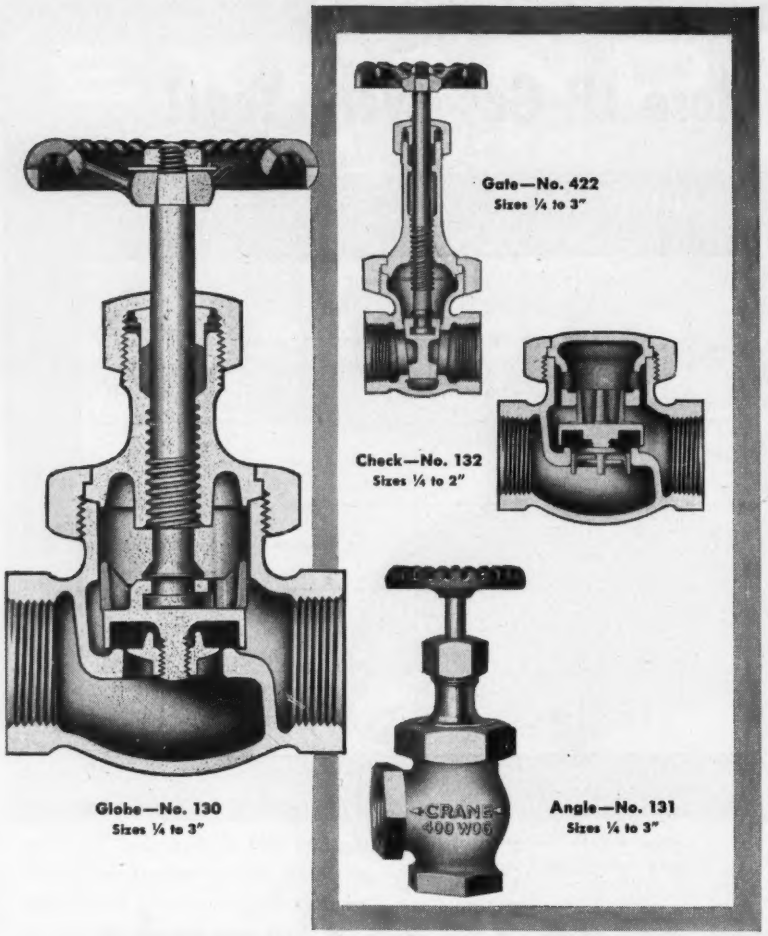
Phillips 66 Philgas
THE ALL-PURPOSE FUEL

Philgas is our name for high quality LP-Gas—Bottled Gas—Butane—Propane.

PHILLIPS PETROLEUM COMPANY

Sales Department • Bartlesville, Oklahoma

Offices located in Amarillo, Tex., Atlanta, Ga., Chicago, Ill., Denver, Colo., Des Moines, Ia., Houston, Tex., Indianapolis, Ind., Kansas City, Mo., Minneapolis, Minn., New York, N. Y., Omaha, Nebr., Raleigh, N. C., St. Louis, Mo., Tampa, Fla., Tulsa, Okla., Wichita, Kans.



These Crane Bronze Valves are built for safe handling of LP-Gases

No matter how you use Crane LP-Gas valves . . . on tanks, tank trucks or in piping . . . you can be sure of *maximum safety*. Rugged design, quality materials and superior workmanship assure you that these valves for LP-Gas service meet the requirements of the Underwriters' Laboratories.

Seat tightness in globe, angle, and check valves is provided by long life composition disc, cemented into disc holder. Gate valves have fully guided wedge disc that seats tightly on integral body seats. Special molded asbestos packing prevents leakage around stems.

Crane bronze valves for LP-Gases are available in all sizes from ¼" to 3" for globe, angle and gate patterns—and from ¼" to 2" for check design. For detailed information and prices, see your Crane Representative or write:

CRANE CO.

General Offices: 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

CRANE'S FIRST CENTURY . . . 1855-1955

ton, president of the company. His experience in the L. P. gas business dates back to his college days when he spent his summer vacations on Suburban Propane trucks, delivering, installing, and servicing customer equipment. Having completed his studies, he started on a round of duties which included wholesale selling, organizing the Suburban marine gas division and successfully promoting the sale of LPG and appliances to boatowners.

Fire Safety Standards Available From NFPA

The National Fire Codes, a compilation of 172 fire safety standards as developed by the National Fire Protection Association, have just been published by the NFPA in a revised six-volume 1955 edition.

There are a total of 43 changes in the 1955 volumes incorporating all of the new and revised fire safety standards adopted at the 1955 NFPA annual meeting and all amendments approved up to July 30, 1955.

Fields covered by the six volumes are: Volume I, Flammable Liquids and Gases; Volume II, Combustible Solids, Dusts, Chemicals, and Explosives; Volume III, Building Construction and Equipment; Volume IV, Extinguishing Equipment; Volume V, National Electrical Code and Other Electrical Standards; and Volume VI, Transportation.

National Fire Codes, $6 per volume, may be obtained from the publications department, NFPA, 60 Batterymarch St., Boston.

Waupaca, Wis., Operation Acquired by Metrogas

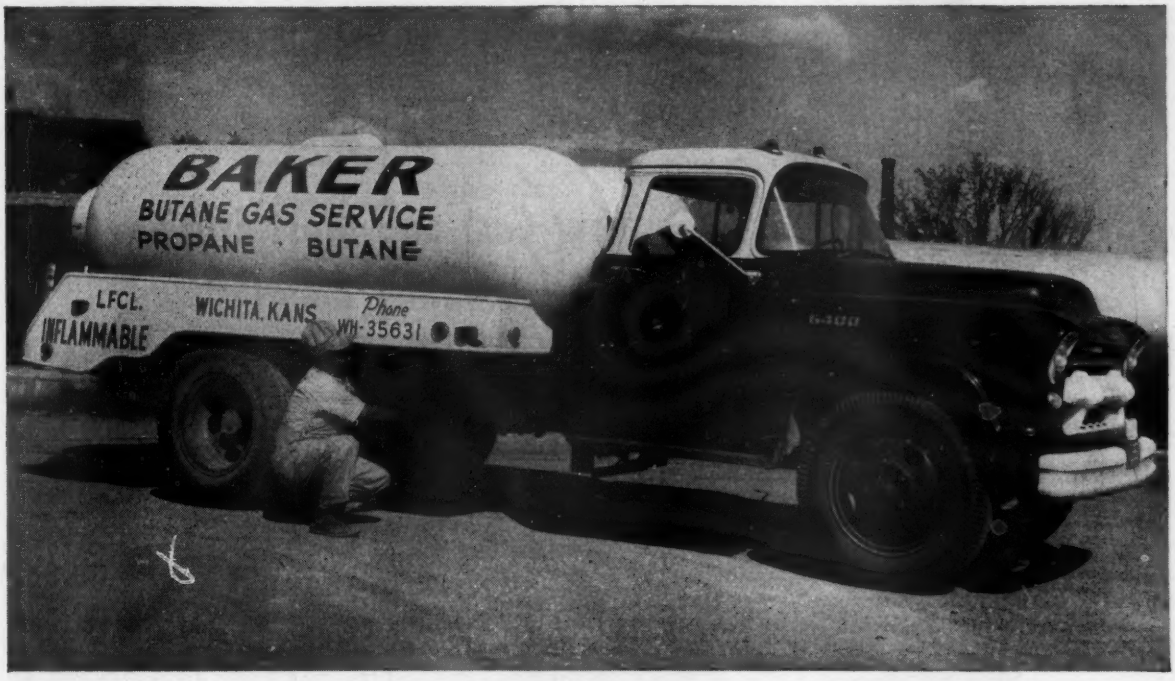
Ralph L. Sieben, president of Metrogas Inc., Chicago, has announced the purchase by Metrogas of Abraham Radio Service Co. at Waupaca, Wis. C. Edwin Abraham, head of the firm, has conducted a bottled gas business in and around Waupaca as a distributor for Philagas.

Metrogas, serving customers in Wisconsin, Illinois, Tennessee, and North and South Carolina, added more than 700 new customers with the recent purchase.

Eastern Seaboard Prices Raised by Major Suppliers

Several major suppliers of propane on the Eastern Seaboard have notified their contract customers of a 0.5 cent per gal. increase in their tank car postings.

One firm increased its propane posting at Marcus Hook, Pa., to 8



Modern Truck Features That Mean Business!

Chevrolet trucks have got it! A full list of modern features that mean better business—on the job today and at trade-in time tomorrow!

When you get right down to it, any truck without all of Chevrolet's Task-Force features is still living in the past. Why risk losing money with an old-fashioned truck—both on the job and at trade-in time—when you can get a Task-Force model with the industry's most advanced features?

Most modern power—V8 or 6. There's longer life in Chevrolet V8's (extra cost in most models). With their short-stroke design—shortest of any leading truck—you can count on less friction and wear per mile. If you go for sixes—Chevrolet's gas-saving valve-in-head sixes are famous for their dependability. All engines are sparked by a modern 12-volt electrical system for quicker starting and smoother going!

Most modern comfort and safety features. New efficiency boosting advances like panoramic windshield, High-Level ventilation, softer seat action and concealed Safety Steps!

Most modern chassis features. New suspensions; new, more rigid frames; Power Brakes standard on 2-ton models!

See your Chevrolet dealer for details. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

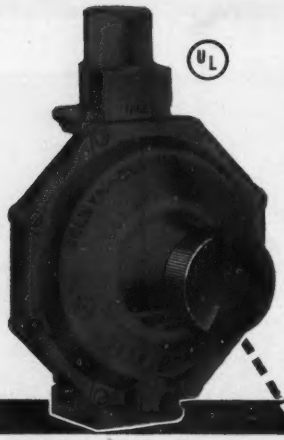
NEW CHEVROLET Task-Force TRUCKS

CHEVROLET

HERE'S BEST REGULATOR HOOK-UP FOR MULTIPLE UNITS

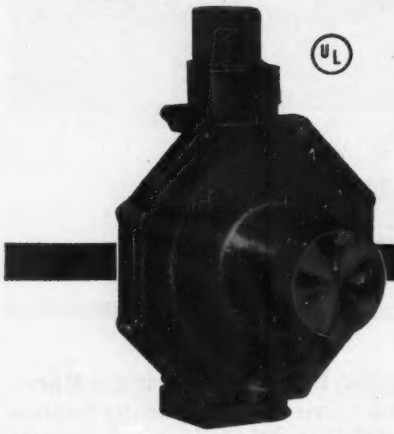
sel-pac

Low Cost and Most Efficient All Weather Installation



MODEL D-1600 HP1

Sel-Pac D-1600 HP1 high pressure regulator with a capacity in excess of 2,500,000 BTU is painted red to indicate high pressure. This high pressure regulator has a large diaphragm with a linkage mechanism of 4½ to 1 resulting in a very low lock-up pressure which is not to be found in SMALL high pressure regulators. (Send for bulletin mentioned below).

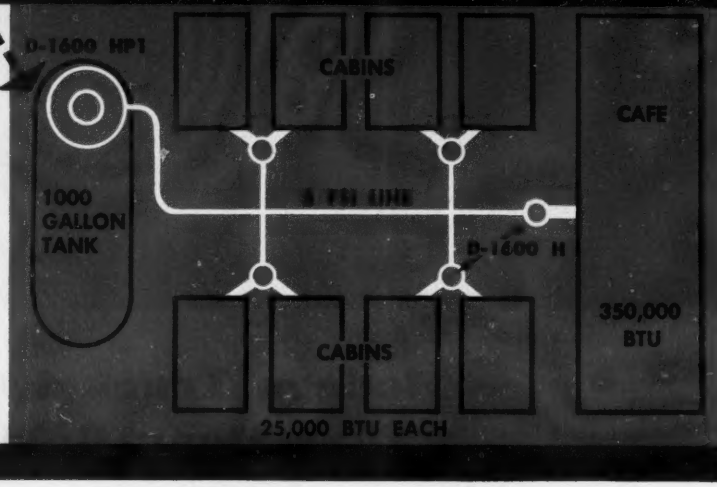


MODEL D-1600 H

This Sel-Pac low pressure regulator, Model D-1600 H will exceed 500,000 BTU with an inlet pressure of approximately 10 PSI. It features an extra large valve seat and is designed internally to reduce or prevent field failures due to freeze-ups, dirty gas, etc. It is painted black to aid heat absorption. One-half inch female pipe inlet connection permits use of copper or pipe with minimum joints and fittings. Standardize on this unit and use it in conjunction with the high pressure Sel-Pac shown above for the most efficient, most economical two stage hook-up.

A comparative test of Sel-Pac regulators will definitely prove their superiority to anything in the LP-Gas Industry today. Check for capacity, low lock-up pressure and easy flow anti-freeze characteristics.

Incorporates large easy to get at gas passageways and husky wrench pads at inlet and outlet. Use both the Sel-Pac D-1600 HP1 and the D-1600 H to achieve the best balance in your two stage system.



TWO STAGE SYSTEM

When you carry in stock the Sel-Pac D-1600 HP1 high pressure regulator with the red body, and Sel-Pac Model D-1600 H low pressure regulator with the black body you can handle almost any LP-Gas installation that comes along. From single domestic dwellings to multiple commercial units, these two regulators are the most universally adaptable in the industry today. They are designed for a set of conditions similar to those shown above wherein the high pressure unit, with a capacity of 2,500,000 BTU will handle a very large installation. With the D-1600 HP1 regulator the gas outlet pressure is reduced to 5-10 PSI and carried through a small line to individual Sel-Pac regulators Model D-1600 H. This permits one low pressure regulator to serve several outlets and give maximum efficiency with minimum piping cost.

Send for the Sel-Pac catalog giving a complete treatise on regulator hook-ups, piping sizes, etc. Our Engineering and Sales Departments are at your service and will promptly reply to any inquiries you may have.

Send For **FREE** Booklet on Regulations and Piping

Selwyn-Pacific Company

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LP-GAS SERVICE TIPS

by GEORGE R. POSTLEWAIT
President
SELWYN-PACIFIC COMPANY

1. A quick opening and closing of a cylinder or tank valve before connecting the pigtail may blow foreign matter from the valve outlet which might otherwise damage the regulator seat.
2. Don't overtighten new P.O.L. connections. If a P.O.L. seat is crushed, excessive tightening is required from that time on.
3. Whenever possible, install regulators in a vertical position with the inlet at the top. This gives moisture, heavy ends, fine scale, etc., a chance to pass on through the regulator and minimizes service calls.
4. Be sure the regulator breather and relief vent is kept open at all times. A frozen or clogged vent not only leads to improper regulation but can cause serious accidents.
5. Don't try to use regulators with large orifices which were designed for second stage operation, as single stage regulators. Erratic delivery, humming, high lockups, etc., will result.
6. Don't expect a regulator with a small orifice designed for single stage operation, to have the same capacity if used as a second stage regulator. The small orifice won't pass as much gas at the reduced inlet pressure.
7. Don't *guess* at the size line on the delivery side of your regulator. Size the line to give an orifice pressure of not less than ½" (water column pressure) less than the outlet pressure at the regulator. (Write us for tables covering the proper size piping for various loads and distances.)
8. Don't guess at your orifice pressure. Use an accurate low pressure gauge or a water manometer to make all final adjustments.
9. Don't screw down the regulator adjustment to obtain higher pressures to compensate for pressure drops caused by under-sized lines. This leads to unnecessary service calls to adjust pilot lights, fluctuating orifice pressures, inefficient combustion, etc.
10. When calculating the size line required from the regulator to the burners, be sure to use the total capacity of ALL burners in determining the line size.
11. Don't install containers any closer to any important building or property line than the distances listed by Pamphlet #58.
12. Never transport ICC containers on which the valves are not protected by either: (1) a fixed collar (welded to the cylinder), (2) a cylinder cap completely protecting the valve.
13. Never transport or install ICC cylinders in a horizontal position or in any position when the safety relief device is not directly connected to the VAPOR space of the container.
14. Never tamper with or try to adjust a safety relief valve. Breaking the seal nullifies the U.L. approval.

Copies of these "SERVICE TIPS" and table of pipe sizes, to fit 3 ring binder, available without cost. Please write

SELWYN-PACIFIC COMPANY
340 West Avenue 26
Los Angeles 31, California

cents per gal., effective Oct. 22. Another hiked its postings at Bayway, N. J., and Baltimore, Md., to 8.25 cents per gal. and at Hastings, W. Va., to 6.25 per gal. A third advanced its tank car posting for Philadelphia to 8 cents.

Action by these firms generally followed a 0.5 cent per gal. increase by the majority of producers in the Mid-continent area.

Opposition to Federal Control of Producers Urged

Reasons why the consumer should oppose federal regulation of natural gas production were forcefully explained to the Executives Club of Milwaukee recently by Rayburn L. Foster, vice president and general counsel of Phillips Petroleum Co.

He pointed out that the producers' price on the national average represents only about 10% of the price that the household consumer pays, the remaining 90% representing the charges for the services of the pipelines and the local distributors.

In answering the charge that a few large oil companies control the sale of gas, Mr. Foster stated that concentration is less in gas production than in almost all extractive industries and four-fifths of all manufacturing industries.

Central City, Ky., Filling Plant Opened by Pyrofax

Pyrofax Gas Corp., a unit of Union Carbide and Carbon Corp., has just opened a new filling plant in Central City, Ky., according to Ray Lam, owner of Ray Lam Sales Co., Pyrofax gas distributor in Central City.

Mr. Lam said that the new plant was built to improve service. It is the 61st in a chain of filling plants extending throughout the eastern half of the country.

R. D. Haynes is superintendent of the new plant. He was formerly at the Terre Haute, Ind., filling station.

Mr. Lam has been the Pyrofax gas distributor in this area for 18 years.

LPG Men to Advise Coleman On Gas Air Conditioning

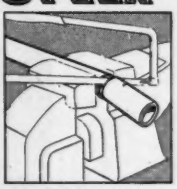
Leading offic[illegible] L. P. gas companies and ass[illegible]s will meet in Wichita, Kan., [illegible]-10 to form an L. P. gas adv[illegible] board that will counsel the Coleman Co. on its research and development in LPG-energized residential air conditioning.

The board will be a companion to the executive advisory board of gas

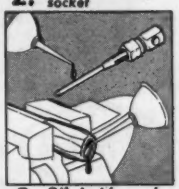
WITH STRATOFLEX

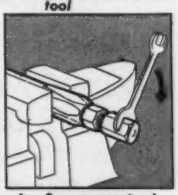
Hose and Fittings

Making up hose assemblies in your own shop or in the field often saves valuable time. The cost of replacing hose lines can be drastically reduced by installing new STRATOFLEX Hose and reusing the detachable fittings. It pays to keep on hand a supply of STRATOFLEX Hose and reusable Fittings. Order from your dealer or write for Bulletin S-2.


1. Cut hose to length

2. Screw on socket


3. Oil inside and insert assembly tool


4. Screw swivel nipple or male fitting into socket and remove tool

STRATOFLEX

STRATOFLEX, [illegible] FORT WORTH, TEXAS
P. O. BOX 10398
BRANCH PLANTS
LOS ANGELES AND TORONTO
SALES OFFICES
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IN CANADA
STRATOFLEX OF CANADA, INC. TORONTO 18, ONTARIO

You get *More* for your money when it's a work-saver

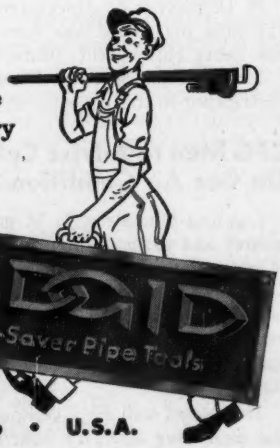
RIDGID

Yoke or Chain Type

Bench, Kit or Post Pipe Vise

More **efficiency...** special design jaws that grip firmly . . . close and open fast . . . pipe rests for more accurate threading, easy cutting . . . handy pipe benders.

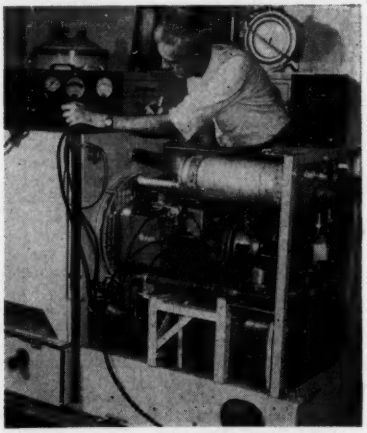
More **service...** famous RIDGID heat-treated jaws for extra long wear . . . special malleable frames that won't warp or break . . . every vise factory tested to assure you super-performance and durability.



Get most for your money— buy RIDGID Vises, including stand and tristand, at your Supply House!

The Ridge Tool Company • Elyria, Ohio • U.S.A.

utility executives that has had two annual meetings in Wichita to advise the company on the earlier stages of the research program. The two boards together will cover air conditioning with all types of gas as the programs is extended to production and distribution, while research continues.



One of two Coleman gas motor air-conditioning units now being operated on L. P. gas is tested by Pyrofax Gas Corp. at Millwood, N.Y. C. A. Westbrook, superintendent of the engineering and development laboratory, is checking combustion efficiency at maximum rated horsepower.

C. L. Burrows, Coleman's sales vice president, has announced a program with three basic parts for the first meeting of the L. P. gas advisory board:

"1. The advisory board will be given a complete and confidential progress report on all of our research, design, and development efforts on LPG air conditioning. The report will cover the research projects going on at university and independent research organizations, as well as the work of our own research teams. We will report on cooperative projects with Minneapolis-Honeywell on controls, D. W. Onan & Sons on the motor for the gas motor unit now being field tested, and Copeland Refrigeration Corp. on specialized compressors.

"2. Complete statistical data will be presented on the operation of the two 5-ton gas motor air conditioners now on test with L. P. gas. Test work on one of these is being done by Pyrofax Gas Corp., and we are testing the other at the company's plant in Wichita.

"3. We will request guidance as to how we should proceed in the future, and we are prepared to follow closely the advice we receive."

The Coleman gas motor air condi-

Bring her *your way*

with PREWAY LP-Gas Appliances

A PREWAY Bilt-In Range

means a built-in gas customer for you

The built-in oven and cooking top idea is sweeping the country — in new construction and for remodeled kitchens. It means less work and greater convenience for the housewife — and for you, with PREWAY, it means the sales opportunity of a lifetime . . . for you can sell the world's most beautiful Bilt-In to the housewife at less cost than a comparable gas range — way underprice any free-standing electric range or electric built-in.

Cash-in on the profit side of this situation and build for a positive future. PREWAY Wall-chef and Counterchef units — with all the automatic features women want — are available in an array of finishes to meet any kitchen planner's color scheme. Make yourself known as the Modern-Kitchen-Man. Send mailing pieces to prospects. Call on architects, builders, contractors in your area. Identify yourself with PREWAY's national full-color advertising in the SHOW-HOUSE Section of the POST, LIVING, BRIDE-TO-BE. Try this, and you'll discover dynamic new sales power.

Now, now is the hour to phone, wire or write to become a PREWAY dealer . . . for there is a feature role waiting for YOU.

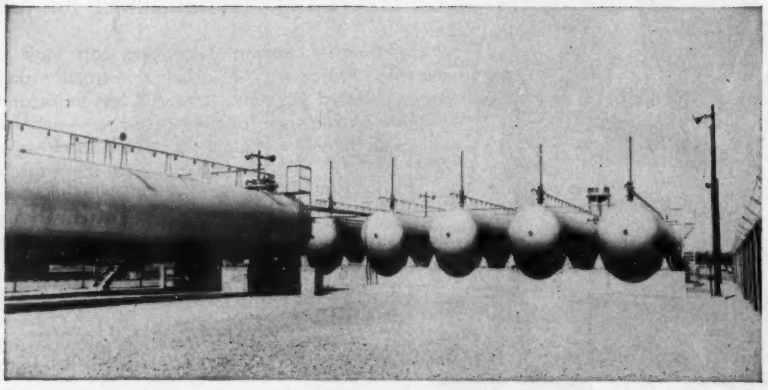
Patents Pending

Beautiful to look at, easy on the budget, economical to use—PREWAY LP-Gas heaters offer you a lot for mighty little. They have the smallest of all cabinets, but the highest BTU input. They provide many automatic features, plus a lifetime burner guarantee and a 20-year warranty on the heater unit. They feature a "wrap-it-up, I'll-take-it price tag." What more reason do you want for being a PREWAY dealer? Phone, wire or write today for the profitable PREWAY proposition.

PREWAY Inc.

6125 Third Street, North
Wisconsin Rapids, Wisconsin

LPG or NH_3



Bulk Storage Plants and Auxiliary Apparatus

•

More than 50 years experience in gas industry equipment lies behind GASMACO Bulk Storage Systems and Auxiliary Apparatus for Liquefied Petroleum Gases or Anhydrous Ammonia.

GASMACO's staff can provide expert knowledge in design and arrangement of all the component parts of your required installation... tanks, fittings, water spray systems, unloading stations, vaporizers, controls, mixing equipment, piping . . . package units.

May we offer the abilities of our organization to assist you with the modernization or expansion of your facilities?

You are assured of the finest in results.

THE GAS MACHINERY COMPANY
16108 WATERLOO ROAD
CLEVELAND 10, OHIO

Designers • Fabricators • Erectors
Gas Plant Equipment and Industrial Furnaces
THE GAS MACHINERY CO. (Canada), Ltd.
HAMILTON, ONTARIO

tioner is expected to be in limited production next year. Some of these units will be equipped for L. P. gas and will be marketed through LPG channels, Mr. Burrows explained. Greatly expanded production now is scheduled for 1957.

"We expect to be able to supply limited quantities of L. P. gas air conditioners for use next year as a means of familiarizing the important L. P. gas groups with the product and assisting them in getting set for active merchandising in 1957. For this reason, the establishment of the right sort of planning is extremely important both to us and to the industry."

In addition to the internal combustion gas motor air conditioning unit now on field test, Coleman is conducting extensive research on air conditioning with four other gas utilization cycles which will be suitable for operation on LPG.

Warren Petroleum and Gulf Oil to Merge

W. K. Whiteford, president of Gulf Oil Corp., and W. K. Warren, chairman of the board of directors and chief executive officer of Warren Petroleum Corp., have announced that an agreement has been reached between Gulf and certain major stockholders of Warren covering the basis for the exchange of Warren stock for stock of Gulf.

All stockholders of Warren, except a group who have agreed to accept a lesser percentage of Gulf stock, will be afforded an opportunity to make the exchange on the same basis as that accepted by Mr. Warren and other officers of Warren Petroleum. This basis will be eight-tenths of one share of Gulf stock for each share of Warren stock.

There are a number of details yet to be worked out which probably will delay the transaction until next month. No change in the management or personnel of Warren Petroleum will be made, and it will continue to operate in its present fields as a separate corporation.

Messrs. Warren and Whiteford said they believed the operations of Warren in its spheres of activity would supplement and round out the operations of the combined companies to their mutual advantage.

Siegler Corp. Would Buy Holly Manufacturing Co.

The Siegler Corp. of Chicago and Long Beach, Calif., through its Hallamore Electronics division, has en-

It's real Co-o-o-o-ol!

That's not jive-talk, even though dealers from coast-to-coast are hopped up about it.

It's sales talk that's persuading more and more of your prospects and customers to turn to Temco—specifically to Temco's remarkable Air-Flow Reflector* Gas Heater, with the *really cool* cabinet.

To your customers it means no more singed curtains, scorched drapes, or burned fingers.

To you it means an exclusive feature you can shout about (using the new cooperative newspaper ad mats Temco has prepared just for you).

In a few brief phrases, Air-Flow Reflector* means cool cabinet, circulating heat without fans, a Temco exclusive—in other words, your key to local leadership in the unvented gas heater field.

*Pat. Pending

. . . And like all Temco heaters, it's engineered to operate with equal efficiency on natural, manufactured, or L.P. gas.

- ★ **Combines advantages of both radiant and circulating heaters.**
- ★ **Striking new beauty of design.**
- ★ **Finished in "Lifetime" Porcelain Enamel.**
- ★ **Approved by A.G.A., guaranteed by Good Housekeeping.**

TEMCO, inc.

NASHVILLE 9, TENNESSEE

"Gas Heating Specialists for the Nation"

"THE COMPLETE LINE OF GAS HEATING EQUIPMENT"

ROOM HEATERS • FLOOR FURNACES • WALL HEATERS
WARM AIR FURNACES AND AIR CONDITIONING

Temco, Inc.: Department B-729
Nashville, Tennessee

Please send me catalog and complete details on Temco's Air-Flow Reflector* Gas Heaters.

*Pat. Pending

Name.....

Firm Name.....

Address.....

City..... Zone..... State.....

SQS

SERVICE • QUALITY • SATISFACTION

A Complete Line of Single and Twin Barrel Propane Truck Tanks

TWIN BARREL

Very popular model. Can furnish in any capacity you desire. Custom made, to your specifications. A unit to be proud of.

TRANSPORTS

Can furnish in single or twin barrel type. Unit constructed so load can easily be shifted to meet different type tractors. Payload makes you money, this is our specialty.

SINGLE BARREL

For one fuel operation, the 1200 single meets all requirements, can furnish any capacity you desire. The leader in its own field.

Send Us Your Specifications and We Will Submit Quotations.

•

Complete Modern Shop Facilities for Mounting and Testing All Pumping, Metering and Propane Handling Equipment.

TWIN BARREL

TRANSPORT

SINGLE BARREL

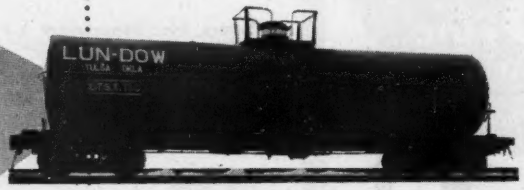
ANHYDROUS AMMONIA

The Pasley Mfg. & Dist. Co.

11th Street • Kansas City, Mo. • Tel. Victor 2360

Refined products for delivery by Pipeline, Transport and Tank Car . . .

BUTANE-PROPANE
PETROLEUM PRODUCTS
ANHYDROUS AMMONIA
PETRO-CHEMICALS



LUN-DOW Company

525 Wright Bldg. Phone LUther 5-1133

TULSA 3, OKLAHOMA

tered into contract to purchase Holly Manufacturing Co., Pasadena, Calif.

John G. Brooks, Siegler president, and J. S. Johnson, founder, president, and principal stockholder of Holly, said the acquisition will be accomplished through a cash transaction.

Siegler manufactures space heating equipment and Holly, in addition to its major production of wall-type heaters, manufactures a line of central heating equipment.

Using a powerful torch, F. E. Levin, Phillips Petroleum, shows editors how 10 gal. of water in the oil drum section came to a boil in 12 minutes under emergency condition.

Editors Learn About LPG At Civil Defense Exercise

Daily newspaper food editors learned about L. P. gas' speed and portability during recent emergency mass feeding exercices at Civil Defense headquarters in Battle Creek, Mich.

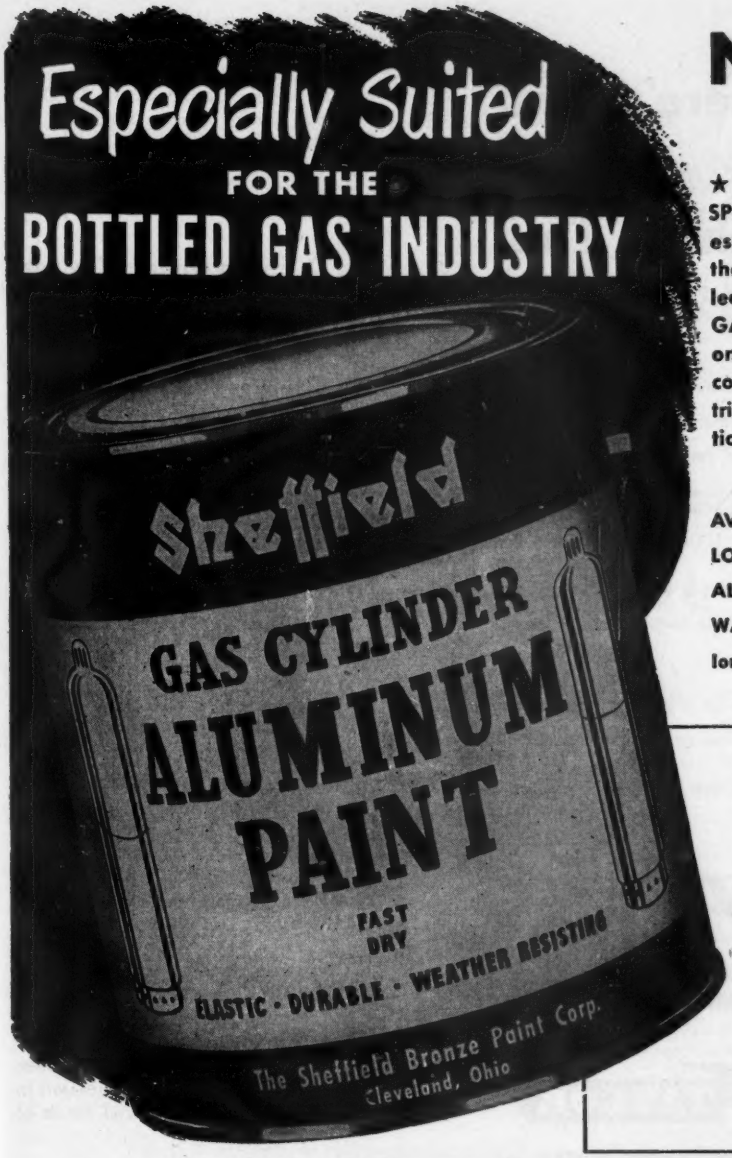
Civil Defense workers teamed up with Michigan L.P. Gas Association men to put on the special field demonstrations for the editors. Pictures of LPG equipment used in the exercises were mounted on trees for viewing by the editors, and were also made available to them by the LP-Gas Information Service.

Suburban Buys Properties Extending to Canada Border

Seven L. P. gas businesses located in four general areas extending from northern California through Oregon and Washington to the Canadian border have been acquired by Suburban Gas Service Inc.

The properties formerly were operated as Tank Gas Inc. and Proflame Gas Co. They served some 4000 customers in Arcata, Calif.; Roseburg, Myrtle Creek, and Sutherlin, Ore.;

Especially Suited FOR THE BOTTLED GAS INDUSTRY



NOW—at New Low Prices

★ A few years ago we introduced this SPECIAL FORMULATION of aluminum paint especially for the gas cylinder industry and the response was overwhelming. TODAY . . . leaders in the industry recognize SHEFFIELD GAS CYLINDER ALUMINUM PAINT as the one paint that takes plenty of abuse . . . and comes up bright and smiling! If you haven't tried it yet . . . send for additional information—and see for yourself!

AVAILABLE IN GALLON, 5 GALLON and 55 GALLON CONTAINERS. Remember . . . SHEFFIELD ALUMINUM GAS CYLINDER PAINT is better ALLWAYS . . . MORE ECONOMICAL . . . a little goes a long way!

- ★ Fast Drying
- ★ May Be Stencilled Within 15 Minutes
- ★ Hard Surface
- ★ Won't Rub Off
- ★ Smooth Finish
- ★ Semi-Lustre
- ★ Long Wearing
- ★ May Be Brushed or Sprayed
- ★ No Unpleasant Odor
- ★ Made With A Special Synthetic Vehicle Insoluble in Turpentine or Ordinary Petroleum Thinners

Sheffield ALUMINUM TANK PAINT

Laboratory Tested

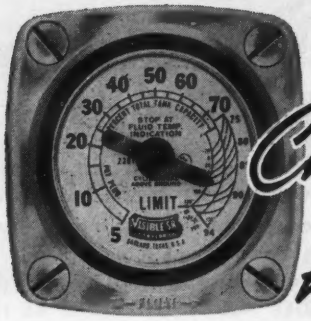
Extensive weather-o-meter tests prove this NEW aluminum paint will resist more than one and one-half years EXPOSURE TO WEATHER EXTREMES! Formulated to do TWO specific jobs . . . to PROTECT surfaces against rust, wear and corrosion and to add a long-lasting attractive finish. Covers all primed surfaces in ONE COAT . . . economical in application . . . economical because it is long lasting!

Ideal For Bulk Gas Storage Tanks

Sheffield Bronze PAINT CORPORATION

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF ALUMINUM PAINTS

CLEVELAND 19, OHIO



There's Real *Character* Behind This *honest face!*

The Float Gauge face you see here is covered with a clear plexiglas crystal and sealed against moisture. The pointer is Alnico magnet with an Alnico magnetic drive.

And the "inside" you don't see is the sturdy steel float which withstands collapse tests over 1000 lbs. per square inch.

Float rod is cast into gear and counterweight assembly. Made of spring steel for deflection without bending, the rod extends through the float for maximum rigidity.

A one-piece gear features shrouded teeth on a stainless steel bearing. Tubing and drive shaft are of corrosion resistant aluminum alloy.

These are only a few points of the fine character reflected on VISIBLE'S honest face!

BEST . . . BECAUSE IT'S . . . PRECISION MADE VISIBLE MAGNETIC

FLOAT GAUGES FOR LP-GAS & ANHYDROUS AMMONIA

SQUIBB TAYLOR INCORPORATED

1213 S. AKARD, DALLAS
MEEDER EQUIP. CO.
1745 N. EASTERN, LOS ANGELES 32

2545 SUMMER, MEMPHIS
ODELL GLASS CO.
1277 HARDEE ST., N .E., ATLANTA

The New Inner Body of the Parkhill Safety Hose Nozzle is now made of steel with corrosion resistant coating. This provides greater strength, longer life, ease of operation. The new design also supplies six flats instead of two for pipe wrench. These and other new features make Parkhill LP-Gas Nozzles the most dependable you can buy.

Parkhill

Safety Nozzle Has Stronger Inner Body

PARKHILL COMPANY
2264 Huntington Drive, San Marino, Calif.

and Quincy, Omak, and Moses Lake, Wash.

This expansion, which increases Suburban's customers from 18,000 to 22,000, marks the entrance of the company into the Pacific Northwest, and further expansion is contemplated, according to President W. R. Sidenfaden.

A. O. Smith Under Way with $4.4 Million Expansion

A $4.4 million expansion program at its Kankakee (Ill.) works was announced early in September by A. O. Smith Corp. The program, already under way, will be completed by late 1956 and will result in the addition of 270,000 sq ft of additional manufacturing and storage space, increasing present area by over 50%.

A. O. Smith manufactures its glass-lined Permaglas domestic water heaters, Burkey commercial water heaters and a line of home heating and air conditioning equipment at Kankakee.

News Notes

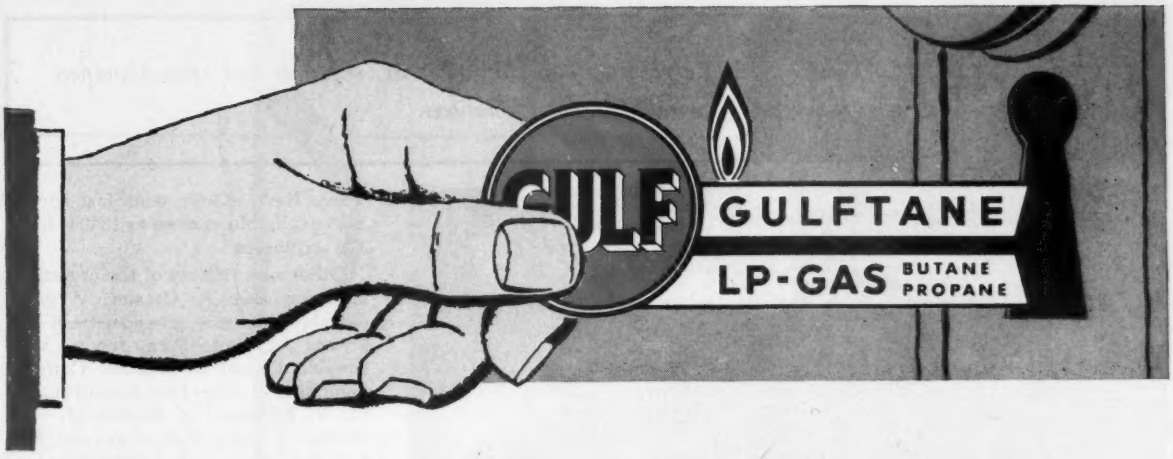
Cotton Butane Co., Lovington, N. M., has been granted a charter of incorporation to store and sell L. P. gas. Capital stock of $250,000 is listed, with $82,000 paid in. Directors are Blewett Cotton, G. T. Hanners, and Lynn Cotton.

Charter of incorporation has been granted Prentiss (Miss.) Butane Gas Co., listing capital stock of $30,000.

Blue Flame Gas Inc. has been granted a charter of incorporation in Coldwater, Miss. Capital stock of $80,000 is listed.

Coastal L. P. Gas Co. Inc., Goldsboro, N. C., has been granted a charter of incorporation listing authorized capital stock of 1000 shares no par value. Incorporators are H. W. Anderson, Wilson; R. O. Creech Jr., La Grange; Ray Adams, Goldsboro.

Mission Appliance Co., Los Angeles, has launched a water heater advertising campaign in southern California consisting for the most part of a barrage of radio announcements every day, all around the clock. All the dealer has to do to participate in the campaign is display the new coppertone Mission Doubleglas water heater at his place of business and he'll get an individual plug over a local radio station. Each commercial will have just one establishment tied in with it.



This key can open the door to greater LP-Gas sales • • •

Here are three good reasons why it will pay you to buy Gulftane LP-Gas:

1 High quality—Gulftane is produced in plants of the latest design under accurately controlled conditions to specifications that meet the highest standards adopted by the LP-gas industry. It is free of moisture, gum, tar, dust, dirt, and sulphur. Or, to put it another way, Gulftane is the same high quality as Super-Refined No-Nox Gasoline and the other well-known products that carry the familiar Orange Disc trade mark.

2 Dependable supply – many natural gasoline plants and refineries, plus adequate storage, assure reliable, continuous supply.

3 Prompt delivery service—modern Gulftane producing plants strategically located throughout Gulf's wide-spread marketing territory, along with a fleet of new tank cars, assure prompt, efficient delivery service.

Also ready to serve you is Gulf's experienced engineering and marketing personnel. Get all the facts concerning Gulftane service—contact your local Gulf District Office or your nearest Gulf Division Sales Office (see addresses below).

131 Ponce De Leon Avenue
Atlanta, Ga.

31 St. James Avenue
Boston 17, Mass.

Gulf Building
Houston 2, Texas

127 Elk Place
New Orleans 13, La.

17 Battery Place
New York 4, N. Y.

1515 Locust Street
Philadelphia 2, Pa.

National Bank Building
Toledo 1, Ohio

P. O. Box 1679
Denver 1, Colo.
(Zone Office)

230 No. Michigan Ave.
Chicago 1, Ill.
(Zone Office)

GULF OIL CORPORATION
GULF REFINING COMPANY
1822 Gulf Building, Pittsburgh 30, Pa.

Associations

Current activities of national, regional and state liquefied petroleum gas associations.

Some of the students attending the L. P. gas heating workshop and conferences. Standing in back are representatives of the companies participating in the schools: Minneapolis-Honeywell, Dearborn Stove Co., Charles A. Perry Co., William Wallace Co., and Surface Combustion.

Series of Home Heating Conferences Under Way

A series of conferences, under the auspices of the LPGA and dealing with the fundamentals of home heating, was conducted throughout the states of Illinois and Indiana recently.

Five representatives of leading manufacturers in the gas heating industry lectured and led discussions on individual aspects of gas heating in day-long sessions. In each area visited by this traveling conference group, local appliance dealers were invited to attend and participate in the meetings.

Among the instructors conducting the conference was George B. McClellan, Metalbestos division, William Wallace Co. He dealt with the problems of gas venting in a meeting that concluded the day's conferences. Preceding him were discussions on "Area Heating," by Ralph Quade, Dearborn Stove Co.; "Heat Loss Calculation," by Bob Ireland, Janitrol division, Surface Combustion Co.; "Warm Air Equipment and Its Application," by Lew Sutherland, Janitrol; and "Controls," by John Parks, Minneapolis-Honeywell Regulator Co.

The series of lectures was sponsored by LPGA as an experimental method of instructing gas appliance dealers in the fundamentals of home heating. The material presented was condensed from standard heating engineering courses and concentrated into a one-day session for the convenience of dealers.

The LPGA initiated this method of instruction in an effort to stimulate dealer interest in better heating practices and thus to improve the general calibre of home heating practices. Reports from the five representatives conducting the series will be submitted to the LPGA for a final evaluation of the effectiveness and interest of this type of conference.

Virginia Gasmen Elect Leitch at Annual Meeting

Robert E. Leitch, vice president of the Bottled Gas Corporation of Virginia, Richmond, was elected president of the Virginia Liquefied Petroleum Bottled Gas Association at the group's annual meeting in October.

The election was held following a talk by Sol W. Weill, general sales manager of the John Wood Co., of Royersford, Pa., in which he emphasized the importance of good will between the dealer and the customer.

Public relations, he said, is a way of life, not a campaign that can be started and dropped at any time. It is the ability to translate, with good sense and good taste, the activities and aims of an organization into terms found understandable and sympathetic to the public.

C. J. McAllister, president of the national LPGA, said during a morning session that bottled gas facilities would be available after an atomic attack for emergency feeding centers, hospitals, schools and other uses. He said damage to bulk plant and other bottled gas facilities in the Yucca Flats, Nev., atomic tests last spring was negligible as close as 1840 ft from the explosion.

Other new officers of the organization are Ray A. Cassett, Virginia Beach, first vice president; E. M. Lyons Jr., Lynchburg, second vice president; and J. Gilliam Conrad, Lynchburg, secretary-treasurer. E. O. N. Williams, of Richmond, was elected a director-at-large and Mr. Leitch was named a district director.

The two-day meeting at Hotel John Marshall ended with talks by Tony Redden, director of education and a representative for liquefied petroleum gas carburetion for the Zenith Carburetor division of Bendix Aviation Corp., Detroit, and A. E. Bone, president of the Eastern Propane Co., Malvern, Pa.

Texas Association Supplies Reflective Truck Decals

The Industry Improvement Committee of the Texas Butane Dealers Association has arranged for mass production of highly reflective and easily readable decal signs for use on the rear of transport and bulk delivery trucks.

Cut from Scotchlite film, the signs come in die-cut 6-in. letters reading "propane," "Butane" and "Inflammable." The signs are brilliant both in daytime and at night, and should help to eliminate rear end collisions. The material is sufficiently flexible to conform to the curvature of the tank heads.

The association supplies these only to members, who receive the benefits of the quantity purchase.

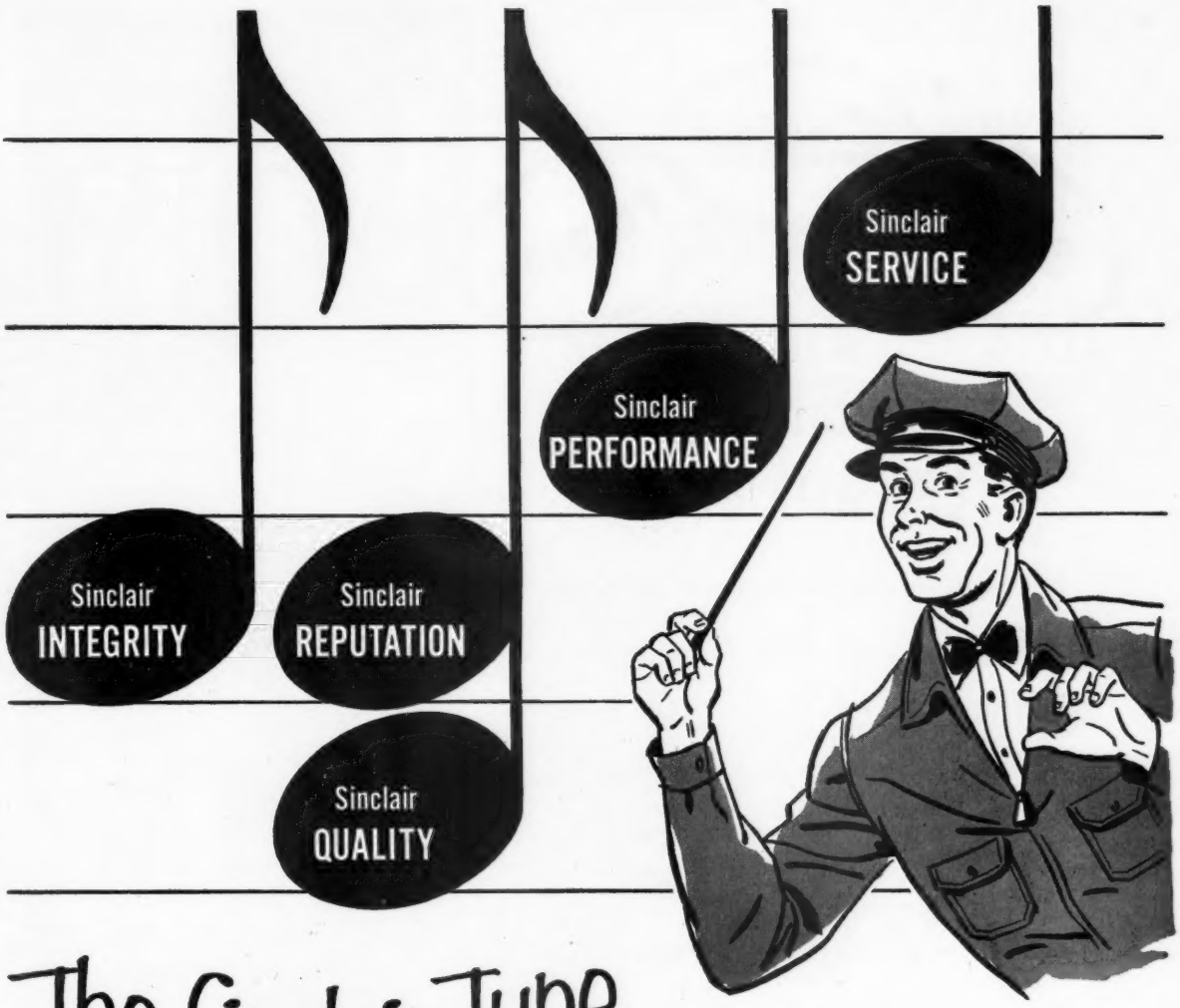
Gas Appliance Men Name W. F. Rockwell President

W. F. Rockwell Jr., president, Rockwell Manufacturing Co., Pittsburgh, was elected president of the Gas Appliance Manufacturers Association at its 20th annual convention in Palm Springs, Calif.

He succeeds T. T. Arden, executive vice president, Robertshaw-Fulton Controls Co.

Other officers elected by 500 convention delegates, largest in GAMA history were:

First vice president, A. B. Cameron, president, Ruud Manufacturing



The Sinclair Tune means Profits for you!

When you hear the full story on the five big Sinclair Bonuses you'll see why it pays to "swing to Sinclair". With every load of Sinclair LP Gas you can count on getting these important extras: Sinclair INTEGRITY – REPUTATION – QUALITY – PERFORMANCE – and GOOD SERVICE. They're the kind of advantages that add up to more, satisfied, repeat customers and a faster growing, more profitable business for you.

Get the facts on Sinclair LP Gas – the gas with high heating value, with moisture and impurities removed. Then swing to Sinclair, soon.

SINCLAIR a great name in oil

SINCLAIR OIL & GAS COMPANY

Liquefied Petroleum as Sales Department • Sinclair Oil Building, Tulsa, Okla.

Butane Carter Propane

it's natural to link LPG with Carter

In the LPG industry, CARTER and unexcelled products are naturally associated. And there's a simple reason for it: CARTER'S LPG products *are* unexcelled . . . the result of more than twenty years' experience in the manufacture of highest quality butane and propane. This experience — gained by men interested in only the best — is yours when you buy LPG from CARTER.

THE CARTER OIL COMPANY
TULSA, OKLAHOMA

Here's why you get
RESULTS
from B-P News Classified Ads

Deadline for copy is 5th of every month preceding publication month.

Your classified ad in B-P News will be seen in 8,193 different LPG plants . . . the most complete coverage of your major market in the LPG industry.

Best evidence of results is the fact that for 16 consecutive years, advertisers have placed more advertising in B-P News than in any other LPG publication.

BUTANE-PROPANE News *Classified* Ads
198 South Alvarado St., Los Angeles 57, Calif.

Co., Pittsburgh,; second vice president, Julius Klein, president, Caloric Appliance Corp., Philadelphia; treasurer, F. Shepard Cornell, vice president and general manager, A. O. Smith Corp., Milwaukee; secretary, Harold Massey, Teaneck, N. J., newly appointed managing director of GAMA who replaces H. Leigh Whitelaw, Greenwich, Conn., both as managing director and secretary.

Mr. Whitelaw was named to a new post of executive vice president.

The new GAMA president - elect represents the second generation in the Rockwell family to hold the top GAMA office. Col. W. F. Rockwell Sr. was the only GAMA president ever elected to two terms and served during World War II.

Indiana Utility Executive Elected AGA President

Dean H. Mitchell

Dean H. Mitchell, president, Northern Indiana Public Service Co., Hammond, Ind., was elected president of the American Gas Association at the 37th annual convention of the association in Los Angeles.

Other officers of the association elected were: C. H. Zachry, president, Southern Union Gas Co., Dallas, first vice president; A. W. Conover, president, Equitable Gas Co., Pittsburgh, second vice president; and Vincent T. Miles, treasurer, Long Island Lighting Co., Mineola, N. Y., treasurer.

More than 4000 delegates attended the three-day meeting, which was held in Los Angeles in conjunction with the annual convention of the Pacific Coast Gas Association, Oct. 17-19.

Safety Theme, New Officers Highlight Oklahoma Meet

Two and one-half activity-packed days, Oct. 16-18, saw the Oklahoma L.P. Gas Association convention at the Skirvin hotel in Oklahoma City completed as one of the best and most successful held to date.

The meeting's keynote address was "What's New With ——?" made by W. H. Guthrie, Phillips Petroleum Co., Bartlesville. Mr. Guthrie compared the problems facing the industry in the 1920's and 1930's with those of today. He said that countless technical problems dealt with by pioneers have been solved. Today, gas sales-

NOW!

FRUEHAUF'S LPG TANKER IS CONSTRUCTED OF FABULOUS NEW T-1 STEEL

T-1

105,000 lb. tensile strength permits lighter shell and head thickness . . . gives extra payload potentials.

T-1 Steel, only recently approved by the American Society of Mechanical Engineers, is already being used throughout in the construction of the FRUEHAUF LPG—anhydrous ammonia Tanker. This great development obsoletes all previous steels used in LPG tankers. Its extraordinarily greater strength-per-weight characteristics reduce overall vehicle weight and increases the payload potential as much as 800 extra gallons! FRUEHAUF's new LPG tanker meets all the design and fabrication requirements of T-1 steel. All welding is double-butt, and all metal components welded into the tank are of T-1 steel. Units in production have over 10,000 gallon propane gross. Long term credit can be arranged.

FRUEHAUF TRAILERS

"ENGINEERED TRANSPORTATION"

FRUEHAUF TRAILER CO.
Detroit 32, Michigan

men are called upon to pioneer new uses for fuel such as tractors, irrigation, incineration and clothes drying. Slides were shown to illustrate the "old" and the "modern."

On the safety theme, those in attendance were urged to be more safety conscious . . . to think for those who are negligent as well as think for themselves. The results of carelessness were shown in an address and slide film plesentation made by H. A. Goodwin, Bastian-Blessing of Chicago. In addition, a safety movie was presented by Gordon Wolfkiel, Sinclair Oil, Tulsa, and state administrator Chester Pate urged association members to remain safety-conscious at all times.

The general meeting sessions were highlighted by a report on "Unified Gas Industry Highway Advertising,"* given by John C. Deupree, sales promotion manager, Oklahoma Natural Gas Co. Mr. Deupree gave a resume of happenings in the recent undertaking of utilities and LPG dealers to promote gas. And much useful information and many facts were given in a panel "Sound Business Practices," moderated by Roy Montgomery, North Texas Tank Co., during which time an open question-and-answer session was held on "Services vs. Products" with Mr. Deupree answering dealers' questions. This discussion was followed by W. J. Montgomery, Beals Advertising Co., as he answered questions concerning "Advertising for Consumer Acceptance" . . . and gave general tips on better advertising programs.

Newly elected officers of the Oklahoma association are (front row, l. to r.): Lewis Mitchell, outgoing president; Marshall Carpenter, new president; Glenn Springer, executive secretary. Back row: Sherman Spradling, 1st vice president, and Gene Sabin, 2nd vice president.

In the first morning general meeting, the dealers present heard a progress report, regarding 2-way radio by K. R. McHenry, Radio Corp. of America. Mr. McHenry reported that more than 120,000 Oklahoma companies have invested in 2-way radio systems. He also discussed the changes in Federal Communications Commission rulings governing 2-way radio systems.

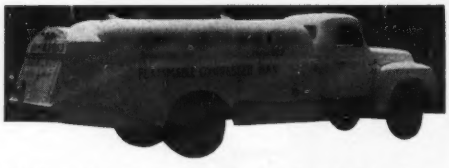
In a great stride forward the Oklahoma association voted to adopt a code of ethics, formulated by a 16-man committee, under the chairmanship of Marshall Carpenter, Lindsay. The adopted code is a follows: "As a member of the Oklahoma L.P. Gas Association, I pledge myself and my organization to render public service founded upon truth and in a manner of fairness to all . . . to operate my individual enterprise in a manner of sincerity that will build good will and public acceptance in the local community and throughout the industry . . . and to encourage industry policies beneficial to all concerned . . . and in full cognizance of our individual and collective obligations to the public."

At the close of the business meeting held on the last day of the convention, the new board of directors met to elect new officers for the coming year. Marshall Carpenter, Lind-

TRUCK TANKS

- TWIN OR SINGLE BARREL
- FULL OR SEMI-STREAMLINED
- DELIVERY TRUCK TANKS
- TRANSPORT TRUCK TANKS

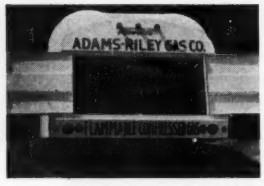
Tailored to fit your needs!



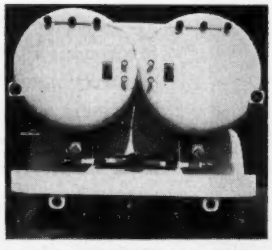
"After shopping around, we decided to have your company install a 1600 gallon twin tank on our new RP170 International. When the truck was delivered, it was more than we really expected in appearance, balance, safety and service. Considering the beauty of the unit, as well as the low price, we feel that we have the finest propane delivery unit available."

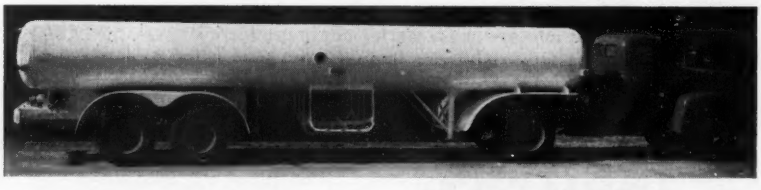
That's one of our customers talking . . . and there's plenty more like him. We'd like you to be a satisfied customer, too. We'll build tanks exactly to your specifications, or design a unit to fit your individual needs. Let's talk it over!

Get our offer before you buy . . .
Call us COLLECT today!



1600 W.G. Twin Truck Tank 41" dia. x 161" O.A.L. on 172" W.B. International. Rego fittings. ICC Lights and Wiring. Streamlined skirting. 3-Way Piping. 20# Foam Fire Extinguisher. 100-ft. 1" Hose. 50-ft. ½" Hose. Neptune Print-O-Meter. K-190 Viking Pump.



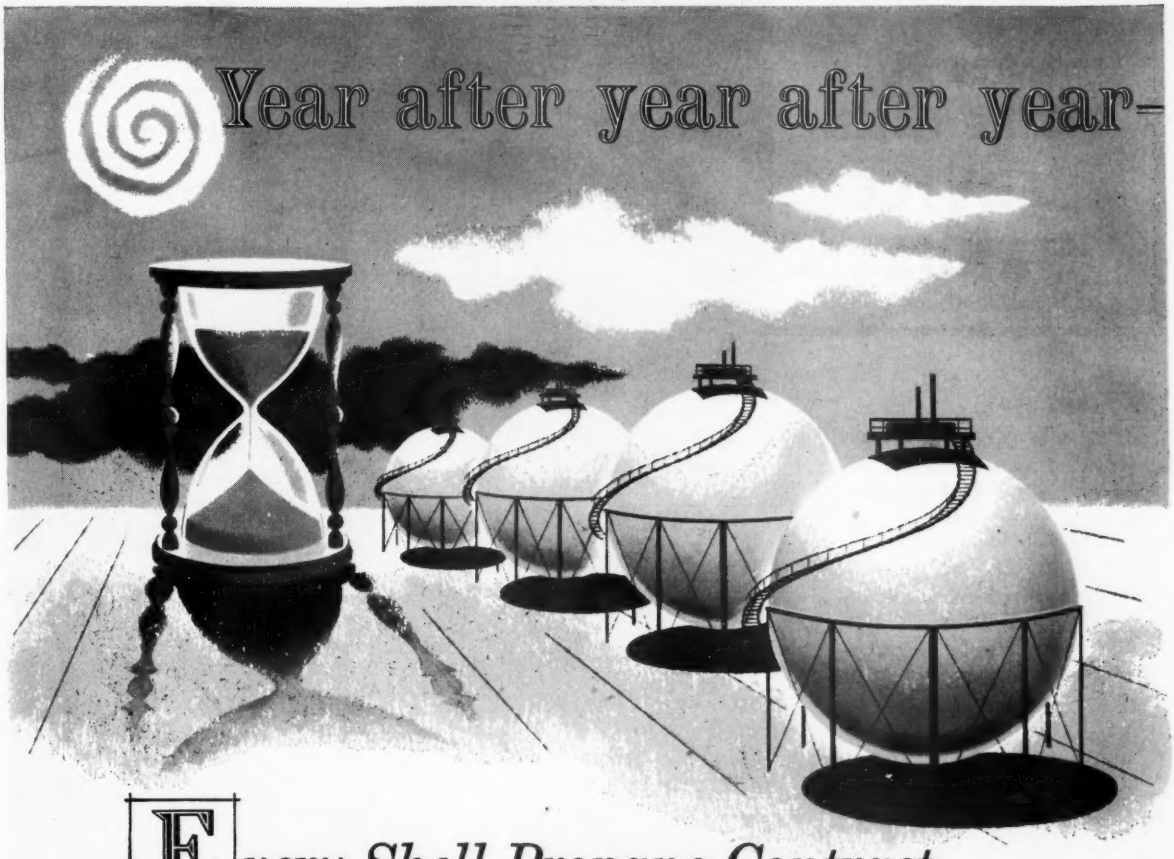


BAGWELL GENERAL STEEL COMPANY

Call us: Sapulpa 2680 Tulsa HI 6-8500

SAPULPA, OKLAHOMA

Write us: P. O. Box 391



Every Shell Propane Contract Customer has this assurance–

My propane supply is proved and reserved for me whenever I want it... along with the competent service that goes with it.

Proved reserves at 26 production centers.

SHELL OIL COMPANY

ALBANY • ATLANTA • BALTIMORE • BOSTON • CHICAGO • CLEVELAND • DETROIT
INDIANAPOLIS • LOS ANGELES • MINNEAPOLIS • NEW ORLEANS • NEW YORK
PORTLAND, OREGON • SACRAMENTO • ST. LOUIS • SAN FRANCISCO • SEATTLE

SHELL

New 28 page
VIKING PUMP SERVICE MANUAL
for
L-P GAS
and
ANHYDROUS AMMONIA

HERE'S how to correctly install and service Viking Truck Mounting Pumps, Bottle Filling Pumps and Tank Car Unloading Pumps.

Send today for your copy of the new 28-page Manual on Viking LP-Gas and Ammonia Pumps, TS-12B.

See our Catalog in the LPN CATALOG

VIKING PUMP COMPANY
CEDAR FALLS, IOWA

WANTED: Technical Writer

We need a technically trained man under 35 for the editorial staff of BUTANE-PROPANE News. He should have a background of mechanical engineering and experience in LPG or Gas Operations — with emphasis on equipment. He should be able to write clearly and cleanly and have done some work in preparing reports. He should have an inquisitive mind and like to probe into the "Why" of things, and be able to explain to others what he has found out.

Experience in magazine or newspaper production as well as photography is desirable, but not essential.

Duties will include field trips to gather data for original articles.

Application by letter only. Send details to:

BUTANE-PROPANE News
198 SO. ALVARADO STREET • LOS ANGELES 57, CALIFORNIA

say, was elected president; Sherman Spradling, Hollis, first vice president; Gene Sabin, Waukomis, second vice president; and Glenn Springer of Oklahoma City was again selected as executive secretary.

*See BUTANE-PROPANE News, October, p. 70.

James L. Deupree, recently named executive secretary of the Alabama association, poses here with his wife, Ann.

Alabama Dealers Name New Executive Secretary

The Alabama Liquefied Petroleum Gas Association has named James L. Deupree as executive secretary, succeeding John Rooney.

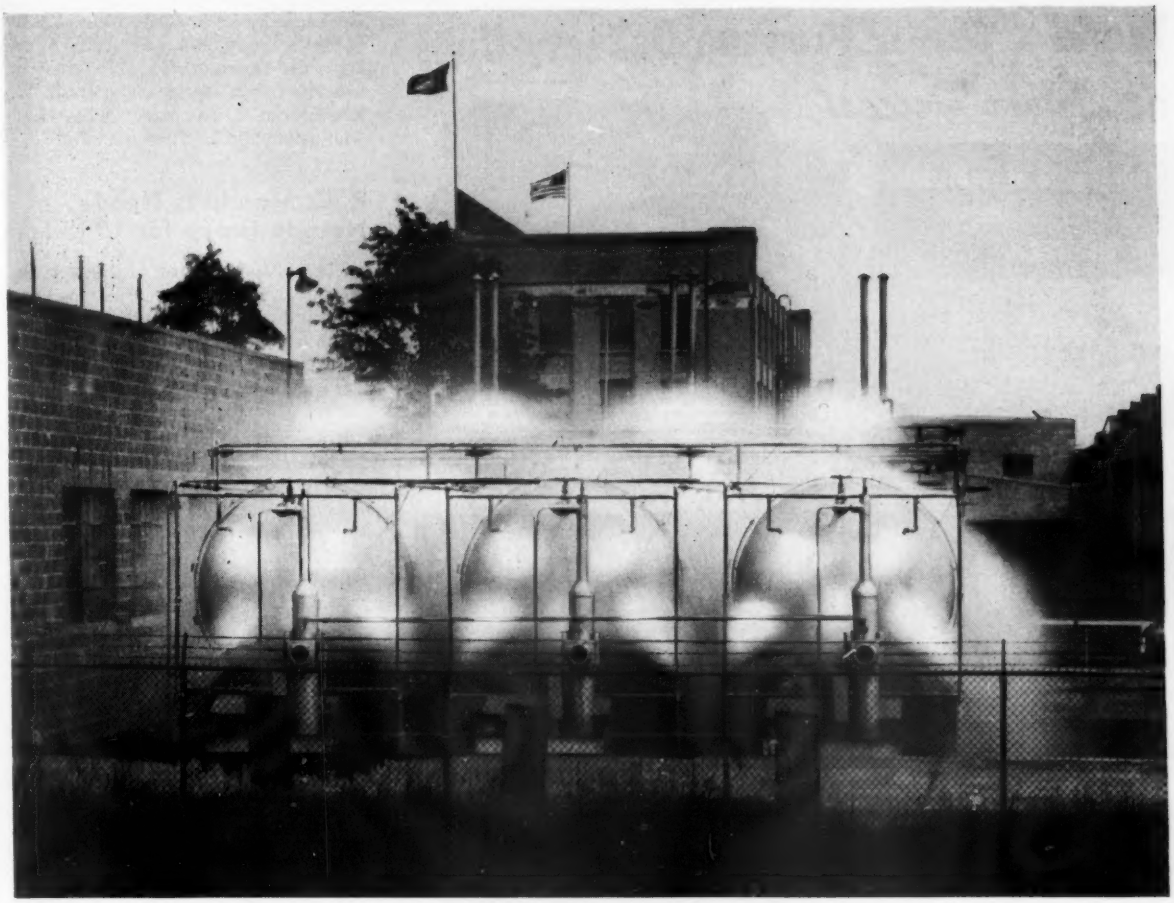
Mr. Deupree has had varied experience in accounting, taxation, credit, and collections, advertising, selling, purchasing, freight claims, customer complaints, and daily problems. He is a graduate of Auburn.

Kansans Gather for One-Day Wichita Meeting

Almost 150 L. P. gasmen gathered in Wichita in October for the 10th annual convention and business meeting of the Kansas L.P. Gas Association. They elected Glenn O. McGuire, Union LP Gas Systems Inc., Iola, to serve as president for the coming year. Serving with Mr. McGuire will be Brent Bolin, Economy L.P. Gas Service, El Dorado, vice president, and J. W. Emmons, Butane Gas Delivery Co., Inc., Pauline, secretary-treasurer.

Also elected at the meeting were two new directors, Clyde Cheatum, Coleman Gas Service Co. Inc., Wichita, and John E. Jones, John Jones Oil Co., Woodston.

C. J. McAllister, president of the national LPGA, one of the chief speakers at the convention, discussed the recent Operation Cue and presented slides and motion pictures of the A-bomb blast. Other speakers and their topics: Charles M. Corken



Protecting LP-Gas tanks against exposure fires

LP-gas is a wonderfully compact source of heat and energy ready to do a hundred useful jobs in the community. But because of this concentration of energy, LP-gas tanks must be protected from exposures to high heat from outside sources. A Grinnell ProtectoSpray system provides such protection.

The drenching water blanket provides instant cooling, to reduce internal tank pressures and to prevent rupture.

In addition, positive air turbulence is created, even in still air, to help dilution of any leaking gas by the inert gases present in the air. Water-vapor dilution assists in thinning out gas-air mixtures toward the point where they will no longer burn. And fire, if it should occur, is localized, permitting safe disposal of the gas by burning where it escapes, thus reducing the fire explosion hazards downwind or downgrade.

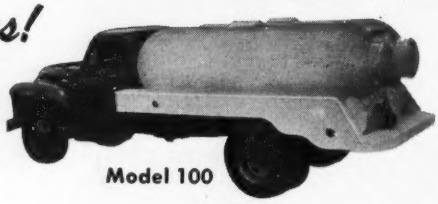
There is a Grinnell Fire Protection System for every fire hazard. Call on Grinnell for advice about the one best suited to your needs. Grinnell Company, Inc., 272 West Exchange Street, Providence, R. I.

GRINNELL
PROTECTOSPRAY SYSTEM

Manufacturing, Engineering, and Installation of Fire Protection Systems Since 1870

World's *Finest* Propane Delivery Units *at Lower Prices!*

Your Choice of 5 Models
Twin or single
600 to 2200 WG.



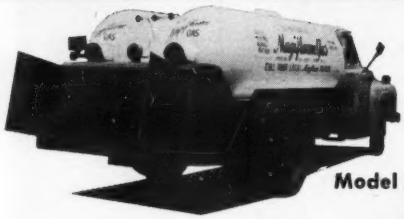
Model 100

Model 300

$3,647.00

Twin propane unit *(pictured above)* is priced complete, ready to use, mounted on a brand new 1956 Chevrolet chassis, PTO, shaft, Viking mechanical seal pump, 50' ¾" filler hose, lights, painted shiny aluminum over red oxide, piped complete and includes Federal tax.

HUNDREDS OF OUR UNITS ARE NOW IN SERVICE *THROUGHOUT THE WORLD*



Model 200

IMMEDIATE DELIVERY on any Models (several sizes available in each Model) mounted and piped COMPLETE on chassis furnished by us.

We are authorized truck distributors (International factory LPG equipped, Chevrolet, Ford, GMC, Dodge or Reo.) We can save you up to $900.00 on new trucks. Each unit is tested and ready to deliver gas when it leaves our shop.

●

We also SAVE YOU MONEY on Tank Installation Trailers—Domestic Systems, 115 to 1,000 W.G., and specially built two-wheel trailers with tank for servicing farm tractors with LPG and anhydrous ammonia.

Model 150

• **EASY TERMS AVAILABLE — (No red tape such as financial statements, etc., necessary.)**

WRITE, WIRE or PHONE FOR PRICES TODAY
WE SAVE YOU MONEY

WHITE RIVER DISTRIBUTORS, INC.
Phone 570 • Batesville, Arkansas

Keep Up with L. P. gas Developments Each Month

BUTANE-PROPANE *News*

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198 SOUTH ALVARADO STREET, LOS ANGELES 57, CALIFORNIA

See Page 2 for Foreign Rates

☐ Check herewith ☐ Bill me ☐ 1 year $2.00 ☐ 2 years $3.00

Name_____ Title_____

Firm_____

Street_____

City_____ Zone_____ State_____

Corken's Inc., "A Little More Profit Please"; Larry Ash, LPG sales manager, the Coleman Co., "Progress in Gas Air Conditioning"; and Irwin W. Kleinmann, Dearborn Stove Co., "Salesmanship Is Showmanship."

R. C. Marold to Head Nevada Group for 1955-56

The annual meeting of the Nevada Liquefied Petroleum Gas Dealers Association was held at the Riverside hotel, Reno, Nev., Oct. 15-16. During the convention the following officers were elected for the 1955-1956 association year:

Robert G. Marold, Sparks, president; Robert Bowen, Las Vegas, vice president; Keith Horning, Winnemucca, secretary - treasurer. F. A. Martin, Reno, was elected as Director from Nevada District No. 1.

Iowa Association Holds First Summer Convention

The first Iowa L.P. Gas Association summer convention was attended by 101 guests at Vacation Village, Lake Okoboji, Spirit Lake, Iowa.

L. T. White, Cities Service Management Corporation was the feature speaker and gave a very interesting talk on the operating cost of the retail L. P. gas business.

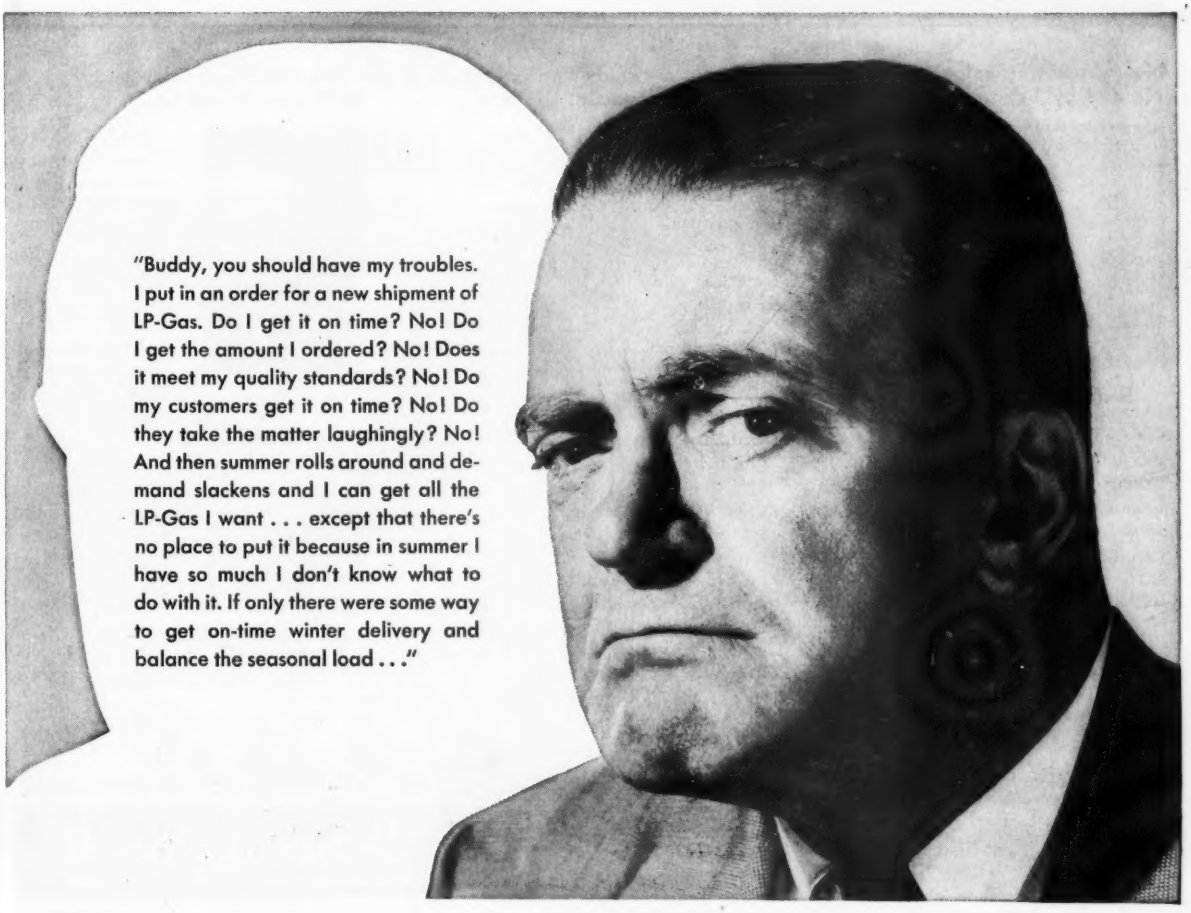
A color film "A Winning Team" was presented by George Schulte, LP-Gas Information Service.

We Are Sorry, Mr. Smithwick

Our attention has been called to the fact that our article in the July issue (p. 88) on Smithwick Concrete Products Co. began with an error which proved embarrassing to that organization. They were not "forced" to change processes to meet the Corps of Engineers specifications. The Smithwick organization, through individual contacts and through the interested trade associations, had consistently advocated with the various federal agencies and with the architectural profession an improved specification limiting the moisture content of that type of concrete block to 25% of the total absorption. Smithwick was producing blocks of this characteristic before the specification was generally adopted. We sincerely regret our error and the embarrassment that it caused.

"I'M NOT LOOKING FOR TROUBLE, I'VE GOT IT!"

(This man is **NOT** a Cities Service Distributor)


"Buddy, you should have my troubles. I put in an order for a new shipment of LP-Gas. Do I get it on time? No! Do I get the amount I ordered? No! Does it meet my quality standards? No! Do my customers get it on time? No! Do they take the matter laughingly? No! And then summer rolls around and demand slackens and I can get all the LP-Gas I want . . . except that there's no place to put it because in summer I have so much I don't know what to do with it. If only there were some way to get on-time winter delivery and balance the seasonal load . . ."

This man needs Cities Service as a supplier. No late shipments with Cities Service! The distributor receives only the highest quality LP-Gas available . . . produced by Cities Service, stored by Cities Service, and delivered by Cities Service in any quantity, anywhere, any time. And to help balance the load, Cities Service provides expert carburetional assistance . . . assistance that's resulting in the conversion of more and more farm and industrial engines to LPG. If this sounds like the kind of cooperation you're looking for, here's an impressive list of advantages that ought to convince you further . . . enough, we hope, to contact one of the Cities Service offices listed below.

QUALITY Completely moisture-free . . . trouble free. Cities Service LP-Gas exceeds NGAA specifications, exceeds sales expectations!

SUPPLY Multiple plants and vast underground storage facilities assure uninterrupted year-round supply.

TRANSPORTATION Tank car and trucking fleets for rapid, quantity delivery.

SERVICES Management, engineering, carburetion, and operational know-how, plus expert promotional assistance. There are Cities Service representatives in every state to help distributors with their problems.

NO SUPPLIER COMPETITION Remember—Cities Service operates no retail outlets, does not compete with distributors. Get the whole, profitable story from one of the offices below.

SERVICE!... Part of our name, part of our business.

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

406 W. 34th Street
Kansas City, Missouri

500 Robert Street
St. Paul, Minnesota

20 N. Wacker Drive
Chicago, Illinois

6611 Euclid Avenue
Cleveland, Ohio

The Trade

News of personnel of manufacturers, contractors, and suppliers to the LPG industry.

New Assistant Sales Manager Named by Bowser Incinor Div.

G. E. Bloom

Gordon E. Bloom has been appointed assistant to the general sales manager of the Incinor division, Bowser Inc., Chicago.

Mr. Bloom has been associated with the gas appliance industry and gas utility fields for the past 26 years. Prior to his appointment with Bowser, he was with the Chambers-Illinois Corp. and supervised the sales of Chambers gas ranges throughout the Middle West. His early experience included a position with Bendix home appliances in charge of gas utilities and major accounts. Prior to this association, Mr. Bloom was sales manager for Servel.

Schneider Heads Engineering Of John Wood Co. Division

F. H. Schneider

Frank H. Schneider has been appointed director of engineering of the heater and tank division of the John Wood Co., Conshohocken, Pa. He had been associated with the Florence Stove Co. in Gardner, Mass., and was later chief engineer and manager of research and development.

Mr. Schneider will assume complete responsibility for all research and development and product engineering for the heater and tank division at Conshohocken, Pa. His associates will be Arthur H. Sutcliffe, research engineer, and Creston M. Loux, product engineer.

Clarke Succeeds Bissell At Crouse-Hinds Co.

A. H. Clarke

Albert H. Clarke, commercial vice president of Crouse-Hinds Co., Syracuse, N. Y., has been named vice president in charge of engineering. He succeeds Carl H. Bissell, retiring after 53 years of company service.

Besides conceiving the first automatic traffic signal controller, Mr. Bissell, as chief engineer, pioneered the company's development of explosion-proof electrical equipment for hazardous areas. Mr. Clarke, while illumination manager, fostered sales engineering and promotion of Crouse-Hinds floodlights, searchlights, and airport lighting, working

He gets the order

because he can deliver the goods!

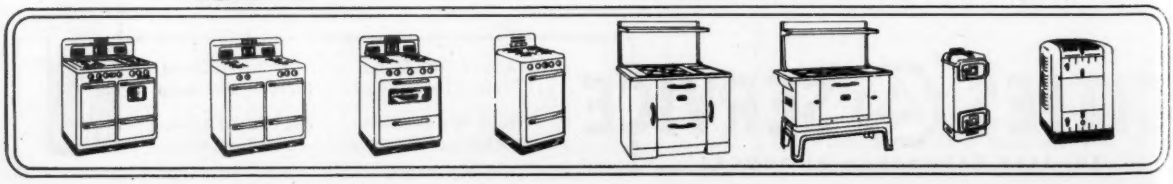
Prompt nationwide delivery is a distinct service advantage enjoyed by dealers in BROWN gas ranges

22 warehouses • Strategically located
Full stocks • Complete line
Three sizes • Thirteen basic models
Parts, accessories and selling aids

It pays to handle BROWN gas ranges

ADDRESS INQUIRIES TO:
Brown Stove Works, Inc., Cleveland, Tenn.

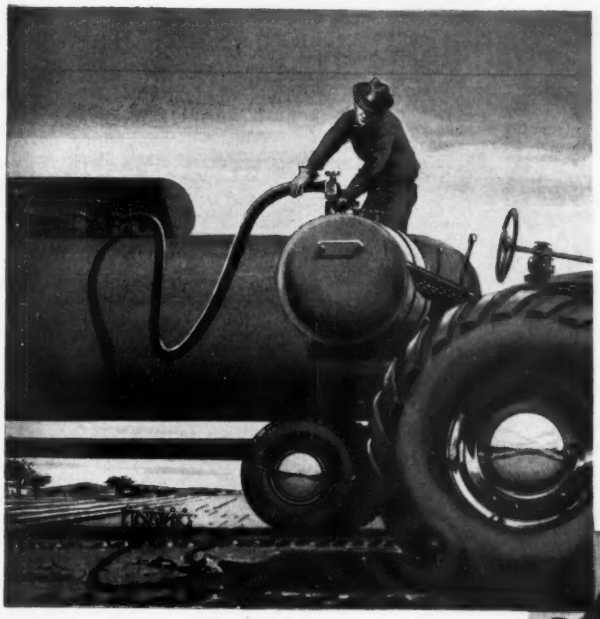
ON WEST COAST TO:
Buck's Stove & Range Co., 22nd and Indiana Sts., San Francisco 7, Calif.
J. N. Ceazan Co., 3535 South Broadway, Los Angeles 7, Calif.
J. N. Ceazan Co., 1945 East Harbor Dr., San Diego 13, Calif.



It's the SAFETY you get with

U. S. AMMONIA HOSE

that counts!



PROTECTION FOR THE MAN WHO TRANSFERS THE GAS

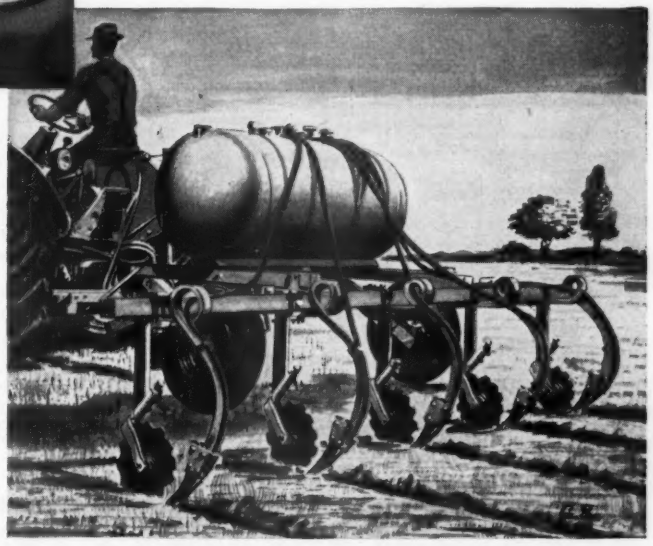
#U. S. Style P-7130 Ammonia Bulk Loading Hose with Wire Reinforcement

Built extra rugged for bulk loading or unloading of tank cars or trucks. Specially compounded tube retards the permeating action of anhydrous ammonia and is highly resistant to low temperatures. *Will not crack.* For greater protection to workmen, the carcass is reinforced with a single ply wire braid (2 plies in 2" size). Black Neoprene cover is specially treated to prevent blistering.

OR

#U. S. Style P-7135 Ammonia Transfer Hose with USTEX Reinforcement

For transfer from bulk loading to storage tank to tractor. It has the added safety feature of ammonia-resistant USTEX yarn, a patented "U. S." development which provides greater strength along with flexibility. Special tube retards permeation. Sturdy, non-blistering Neoprene cover.



PROTECTION FOR THE MAN ON THE TRACTOR

#U. S. Style P-7135

Ammonia Transfer Hose transfers under pressure from tractor tank to pressure reduction valve. See above for hose construction details.

#U. S. Style P-7136 Ammonia Applicator Hose

This hose assures reliable, *safe* conveyance from pressure reducing valve to applicator blades. Tube and cotton carcass are resistant to action of anhydrous ammonia. Neoprene cover is specially treated to prevent blistering.

For the GREATER safety of men working with anhydrous ammonia, get U. S. Ammonia Hose—transfer and application—from any of our selected distributors or any of United States Rubber Company's 27 District Sales Offices. Or write address below.

"U. S." Research perfects it..."U. S." Production builds it...U. S. Industry depends on it.

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Hose • Belting • Expansion Joints • Rubber-to-metal Products • Oil Field Specialties • Plastic Pipe and Fittings • Grinding Wheels • Packings • Tapes Molded and Extruded Rubber and Plastic Products • Protective Linings and Coatings • Conductive Rubber • Adhesives • Roll Coverings • Mats and Matting

EXPLOSION-PROOF SWITCHES

EXPLOSION-PROOF LIGHTING FIXTURES

EXPLOSION-PROOF PLUGS & RECEPTACLES

EXPLOSION-PROOF CONTROL STATIONS

EXPLOSION-PROOF MOTOR CONTROLS

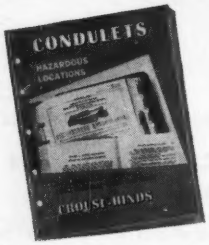
EXPLOSION-PROOF ELECTRICAL EQUIPMENT

L-P Gas storage tanks, pump rooms and filling areas are among the many industrial locations which the National Electrical Code has classified as hazardous areas. Explosion-proof electrical equipment is a "must" for these locations.

A Crouse-Hinds Field Engineer will be glad to look over your present plant — or your plans for a new one — to see whether your electrical apparatus and wiring conform to Code requirements. This Crouse-Hinds service costs you nothing and imposes no obligation.

FREE! Crouse-Hinds has prepared an 82-page booklet containing Articles 500 and 510 of the latest revised Code . . . explosive characteristics of various vapors and gases (including propane and butane) . . . pictures of installations of Crouse-Hinds explosion-proof equipment which meets Code requirements. *Mail coupon for your free copy.*

CROUSE-HINDS COMPANY



Crouse-Hinds Company
Dept. BPN, Syracuse 1, N. Y.
Please send free booklet on electrical equipment for hazardous locations (Bull. 2655).

Name.....
Title.....
Firm Name.....
Address.....
City..... Zone ..... State.....

with government aviation and weather agencies on many airport lighting developments.

Jay R. Petree, assistant chief engineer, will now become chief engineer and John R. Haney will succeed Mr. Clarke to the post of manager of Crouse-Hinds illumination department.

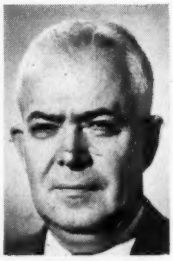
R. P. Young New York Manager For Peerless Pump Division

R. P. Young

Robert P. Young has been named manager of the New York district office of Peerless Pump division, Food Machinery & Chemical Corp. He succeeds F. W. McCann, resigned.

Mr. Young joined Peerless Pump in 1948. More recently he has been a Peerless sales engineer, with headquarters in Pittsburgh.

Henderson In Charge of Sales For A-P Controls Corp.



D. Henderson

Duncan Henderson has been named administrative assistant in charge of sales, a new post within the sales organization of A-P Controls Corp. He will coordinate sales and service department activities at the home office in Milwaukee. Before joining A-P in 1953 as national service manager, he was with Gas Consumers Service and Consolidated Edison Co., New York.

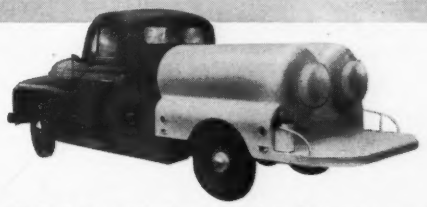
Additional appointments at A-P Controls include naming James Tate to the newly created post of assistant to the president. Robert W. Sloan, who has been handling field engineering projects for the past three years, is now responsible for sales-engineering in heating sales of gas and oil controls. Stanley Burghduff and John Rice are now technical staff advisors in heating sales.

Integration of Perfex Division Results In Several Appointments

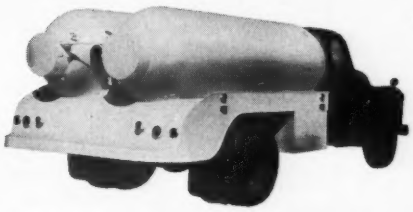
Final integration of the Perfex Division activities into overall operations of General Controls Co. has been achieved, J. F. Ray, vice presi-

it DOES make a difference WHO builds your next tank!

In our many years in business we have encountered some of the most exacting specifications from firms all over the country... coast to coast and Canada to Mexico... who demand and have the money to buy the best, and whatever the job... whether for one unit or an entire fleet... whether for a hot-shot bottle refill unit or a multi-thousand gallon transport... they all get the same care and my personal supervision. Whatever your problems, you can bring them to us with complete confidence knowing that their solution will be backed by 32 years' successful experience.



You'll find that each of our units has the same strength, utility and design for economical service, be it the small "hot-shot" bottle fill unit... the 1,200 to 2,000-gallon



delivery unit with its smart flowing lines, or... the big,

multi-thousand gallon step-down transport which has attracted the attention of the press because of its unique design, balance and all-around safety features.

FEATURES:

- **SCIENTIFIC KNOW-HOW**
  plus years of experience insure safe, efficient, economical operation.
- **INDIVIDUALLY ENGINEERED**
  Each job is an individual operation using the latest methods, tailored to meet state requirements and maximum payload.
- **REAL CRAFTSMANSHIP**
  We employ only trained and skilled mechanics who take pride in their work.
- **PROPER SUPERVISION**
  Every job is carefully and personally supervised.
- **ANY SIZE — ANY STYLE**
  Whatever your needs... on the ground, on skids, on wheels... our Engineering Department is capable of turning out a specific model for a specific use.
- **IT PAYS TO GET THE BEST EQUIPMENT**
  In the long run, it is not only service but ECONOMICAL service that counts. Dal-Worth has established a record for that!

CERTIFIED CONSTRUCTION
DAL-WORTH TANK CO.

DAL-WORTH
TANK COMPANY
W. G. (Red) Brumit, Owner
BOX 818
GRAND PRAIRIE
TEXAS

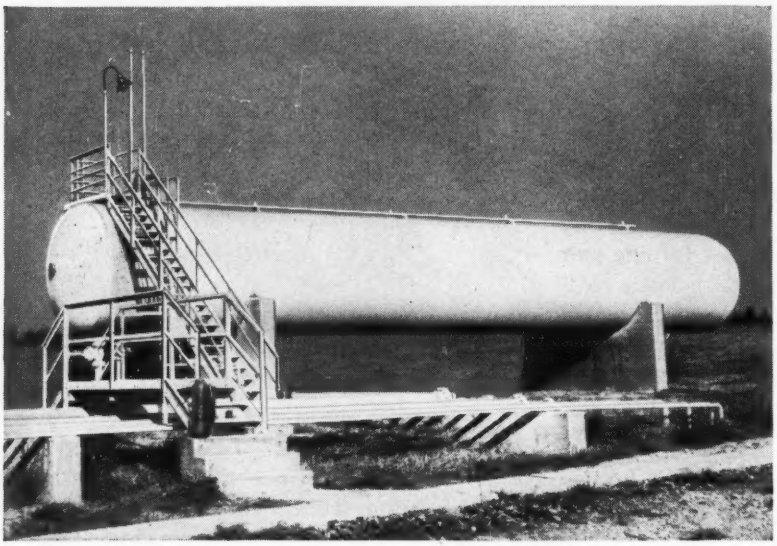
dent in charge of sales for the California automatic controls manufacturer, annnounces.

Maurice Eastin has been appointed manager of sales for the new division and will be based in Skokie, Ill., General Controls' Eastern sales headquarters.

Other members of the Perfex Division sales group, which has been moved from Milwaukee to Skokie, include Ray Horan, merchandising manager of field engineering, and Harold Welnitz, assistant manager of service engineering.

Additional appointments in the Perfex Division sales organization are Hugh Cameron, who will serve as regional manager for the Cleveland region and James McGuire, who has been appointed regional sales representative for Perfex Division products in the New York region. He will be located at the General Controls Co. regional office in Long Island City.

Other Perfex sales division appointments include the following men as sales representatives: George Hobby, Belleville, N. J.; Richard Gallagher, Boston; George Williams, Detroit; Warren Edwards and Elmer Szabo, Cleveland; Erwin Wiese, Milwaukee; George Schuck, Baltimore; Hugh Hackett, Philadelphia; and Irving Parri, Portland, Ore.



Safe, Low-cost Storage for LP-Gas or Ammonia ... Bulk Tanks by Downingtown

Extra-sturdy tanks by Downingtown Iron Works assure extra years of safe storage—extra-low maintenance costs year after year.

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LPG Credit Corp. Elects J. E. Parsons Vice President

J. E. Parsons

J. E. Parsons has been elected vice president of LPG Credit Corp., Cleveland. In his new position Mr. Parsons will supervise sales and operations of all divisions. He joined LPG Credit Corp. in 1950 and since that time has served as assistant to the president.

Upon his election, Mr. Parsons announced the promotion of James B. Cogan to manager of retail installment sales division and Ray W. Bracher as manager of central credit division.

Rockwell Opens Denver Branch, Names Cochran Manager

O. Cochran

Rockwell Manufacturing Co.'s Meter and Valve division has opened a branch office at 1421 Mile High Center Bldg., Denver, Colo., and has named Orville Cochran branch manager.

Mr. Cochran, a native of Livingston county, Mo., has been a sales engineer for Rockwell in the Rocky Mountain territory for more than 25 years. He joined the company in 1922, spending eight years in the Kansas City district office.

He has lived in Denver for the past nine years.

J. L. Minner Heads Shell's New Fuel Oil-LPG Department

A new fuel oil-L. P. gas department has been established by Shell Oil Co. to handle sales of all the company's fuel oil and liquefied petroleum gas. The marketing of these products was previously directed by separate departments.

J. L. Minner is manager of the new department. J. G. Fuller is manager of the department's L. P. gas division. Assisting him in marketing LPG are E. E. Williams, who directs Shellane

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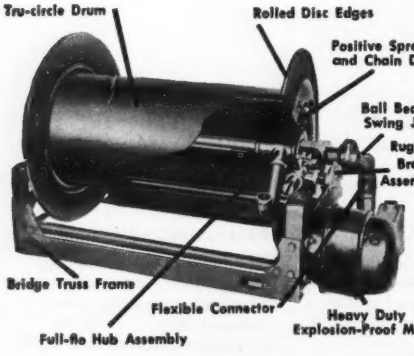

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sales, and C. F. Dexheimer, who handles tank car sales.

C. B. MacGlashan is manager of the fuel oil-L. P. gas department on the West Coast and T. S. Johanson is West Coast L. P. gas representative.

John Hall Heads New Contract Division of Utility Appliance

J. L. Hall

John L. Hall has been named manager of Utility Appliance Corp.'s new contract division to handle construction, builder and architect sales.

Jack Hall has 25 years of service with the Southern California Gas Co. behind him and at the time of his resignation held the position of general staff supervisor, new business sales.

Mr. Hall will include Mission products in his new sales operation, as well as the Gaffers & Sattler automatic gas range division of Utility Appliance Corp.

Honeywell Industrial Division Promotes Field Sales Engineers

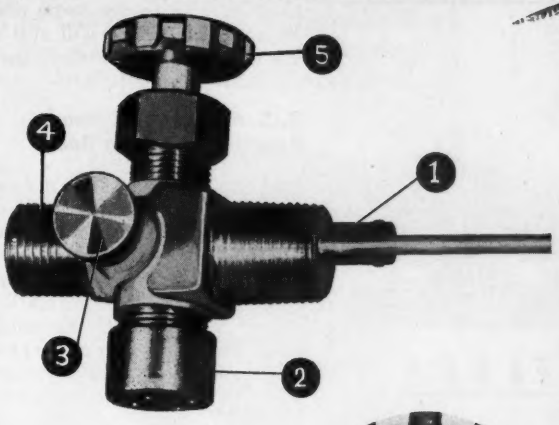
Promotion of three field engineers to key industrial division posts is announced by Minneapolis-Honeywell Regulator Co.

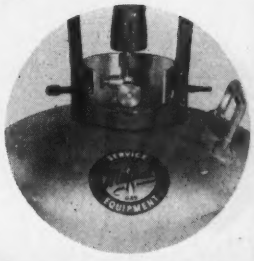
James W. Hughes has been named regional industrial sales manager for the company's Midwest region with headquarters in Chicago. Raymond A. Zack will become industrial sales manager in the company's Hammond, Ind., branch office, and Paul R. Sharadin has been assigned to the new position of regional application engineer for the Southwestern region with headquarters in Dallas.

Pan American Promotes Davis To Supervise Field Engineers

With the reorganization of the safety engineering department of Pan American Fire & Casualty Co. and Pan American Insurance Co., Houston, L. E. Davis has been put in charge of the companies' field engineers. He has been chief safety engineer for the companies, which are large insurors of LPG accounts in the South and Southwest.

Mr. Davis has been associated with Pan American for more than eight years, during which time he has traveled more than 750,000 miles inspecting and servicing accounts. Although





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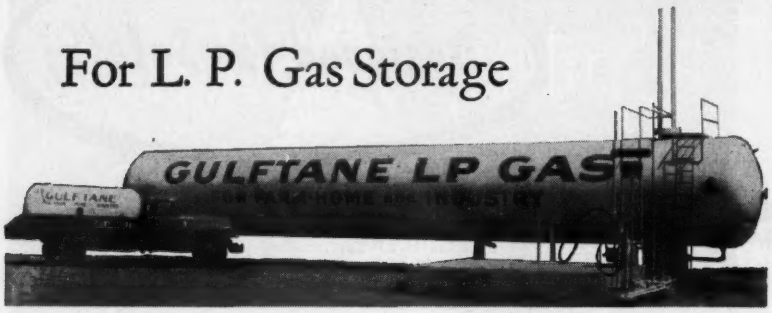

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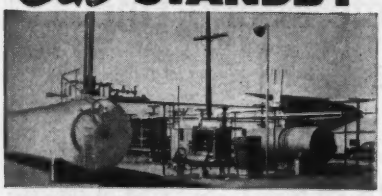

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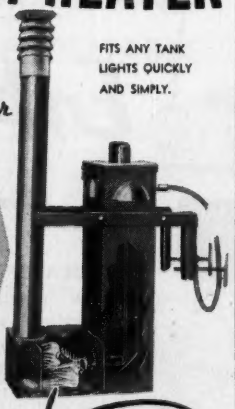

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he is moving to the home office in Houston, Mr. Davis will still spend a good portion of his time in the field.

R. S. Reynolds Jr. Heads Robertshaw-Fulton Board

R. S. Reynolds

At a recent meeting of the board of directors of Robertshaw - Fulton Controls Co., R. S. Reynolds Jr. was elected chairman of the board of the company. He succeeds his father, R. S. Reynolds Sr., who died July 29.

Mr. Reynolds has been associated with the company since its formation, serving as a director and financial vice president.

At the same meeting, the board named J. Louis Reynolds and John A. Robertshaw Jr. directors to fill vacancies on the board. J. Louis Reynolds is a vice president of Reynolds Metals Co. and Mr. Robertshaw is assistant vice president of Robertshaw-Fulton, in charge of foreign operations.

American Meter's Birmingham Office Adds Sales Engineers

New sales engineers have been added to the staff of the American Meter Co. in its Birmingham, Ala., sales district.

Leo C. Mueller Jr. will headquarter at Mobile, and Hugh A. Bate will work out of the Birmingham office.

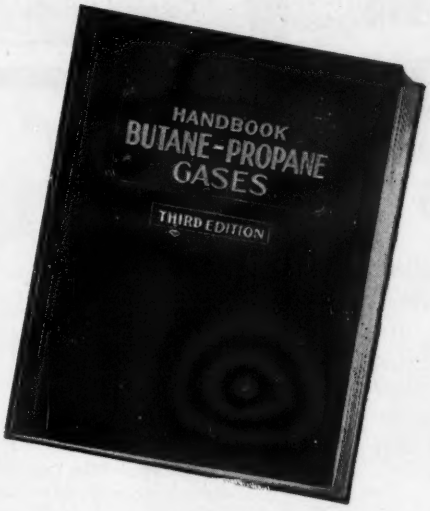
In Canada, the Canadian Meter Co. Ltd. has appointed William H. George as sales engineer with headquarters in Regina, Sask. John W. Ostler is general manager of the company.

Kenneth F. Fottler

Kenneth F. Fottler, 49, Jersey City, N. J., died Oct. 14 from a heart attack. He was sales engineer for Drake & Townsend Inc., New York engineering firm.

Prior to his association with Drake & Townsend, Mr. Fottler spend five years in France, Italy, Holland and other European countries as engineer for North American Utilities. For 23 years he was with Cutler-Hammer as an engineer on gas measuring and mixing.

The Only Complete Reference Book on Liquefied Gas Engineering, Installation and Operation



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Dec. 7—Wisconsin LP Gas Association Convention—East Side Business Men's Association Club House, Madison.

1956

January 4—New York LPGA annual convention, DeWitt Clinton hotel, Albany.

Jan. 15-16—Arkansas LP Gas Association Annual Mid-Year Meeting—Hotel LaFayette, Little Rock.

January 19-26—National Housewares & Home Appliance Manufacturers Exhibits, Navy Pier, Chicago.

Jan. 30-31—Michigan Liquefied Petroleum Gas Association Convention—Hotel Statler, Detroit.

February 16-19 — Eastern Canadian LPGA Convention — Mount Royal Hotel, Montreal, Quebec.

February 28-29-March 1—LPGA District convention and Trade show, Sheraton-Park hotel, Washington, D. C.

March 26-28 — Southeastern District LPGA convention and trade show, Atlanta-Baltimore hotel, Atlanta.

April 5—GAMA 7th Annual Atomic Gas Range conference, Hotel Pierre, New York City.

April 6-9—Northwest District LPGA Annual Convetion — Multnomah Hotel, Portland, Oregon.

April 23-25—Association of Nebraska LPG Dealers, annual state convention, Fontenelle hotel, Omaha.

May 6-9—LPGA 25th annual convention and trade show, Conrad Hilton hotel, Chicago.

June 10-12—Arkansas LP Gas Association Annual Convention — Arlington Hotel, Hot Springs, Ark.

All associations are invited to send in dates of their forthcoming meetings for this calendar.

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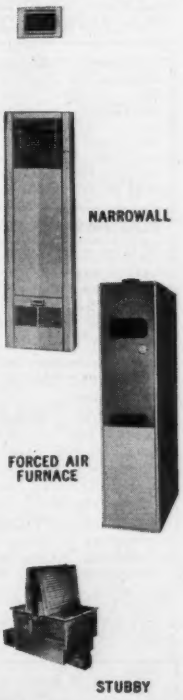

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FOR SALE: 1951 IHC-L-190 TRANSPORT. 5500 gallon capacity. Trinity twin U-69 tanks. All in A-1 condition. Complete for $7,250.00. Ace Gas Inc. Phone 2-2121, Edgar, Nebraska.

EASY TERMS AVAILABLE ON ALL NEW or used propane units. We carry our own paper—no red tape involved. 5 Models of twin or single truck tanks in sizes from 600 to 2300 WG available. You may furnish your own chassis or we have any make or model NEW 1956 Model truck available at prices that really SAVE YOU MONEY. FAST DELIVERIES. WHITE RIVER DISTRIBUTORS, INC. Phone 570, Batesville, Arkansas.

NOR-TEX "PACKAGE UNITS" SAVE TIME AND MONEY. They earn more! They cost less! We will mount this 1400 WG U-69 Twin Delivery Unit on a new truck of your choice or on a truck you now have for only $1,935.00 (Excise Tax paid). The unit is equipped with high flow piping. Delivers more gas in less time. Has trim skirting, P.T.O. spline jack shaft, Viking mechanical seal pump, 50 ft. filler hose and ICC lights. Painted white enamel over red oxide. Call NOR-TEX PRODUCTS COMPANY collect, C-5416, Denton, Texas.

FOR SALE - TRUCKS - TRAILERS - Cont.

TRAILER PARK SPECIAL: 750 WG PROpane tank with side cabinet and cylinder rack, space to mount scales, mounted on 1956 Chev., dual rear tires, $2,915.00. Plumbing, meter, etc., extra. Also ideal for bulk deliveries. EASY TERMS. White River Distributors, Inc., Batesville, Arkansas.

1952 FRUEHAUF PROPANE TRANSPORT for sale with 1952 White cab over tractor. Will sell tractor or trailer or trade complete unit on 3,000 gallon transport or 2,000 gallon bobtail. E-Z Gas, Inc., Goshen, Indiana.

GOOD USED SINGLE BARREL BOBTAIL
1690 gallon W.C., 200# W.P., 1952 F-6 Ford. New Smith 2½-inch pump, P.T.O. Ensign carburetor, complete with hoses, ready to deliver propane. $1800.00.
UTAH-COLORADO GAS CO.
P. O. Box 348, Vernal, Utah

TRANSPORTS: SINGLE OR TWIN barrel; new or used; for lease, or sale on budget or rental sale plan. If you want maximum payload, with all of the latest equipment engineered to fit your truck, roads, and your hauling problem, get the LMC PAYLOADER.
Contact Lubbock Machine & Supply Co., Inc., Drawer 1589, Lubbock, Texas.

FOR SALE: 5000, 5500 and 6000 gal. W.G. U69 Tandem Propane Twin Barrel Trailers. Choice of 16 with 50% 10:20 tires, air brakes. Now operating. Texas R.R. Commission, ICC, ASME approved. Delivery will be made to most northern cities for $200. Write for pictures, details. IRVIN F. NELIS ASSOCIATES, P. O. Box 14472, Houston 21, Texas.

PROPANE
DELIVERY TRUCK

Brand new, 1956 Chevrolet chassis and 1200 WG twin or single tank, piped complete with Viking mechanical seal pump, PTO, shaft. 50' filler hose, painted, with lights. READY TO USE, including Fed. Excise Tax, ONLY—

$3,678.00 — 25% Down
Balance 24 Months

Other sizes of new tanks, with or without chassis, 600 to 2300 WG. Several late model USED PROPANE TRUCKS, 1100 to 1800 gal. in stock.

WHITE RIVER
DISTRIBUTORS, INC.
Batesville, Arkansas
Phone 570

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FOR SALE - TRUCKS - TRAILERS - Cont.

HURRY! TRANSPORT SPECIAL! 1951 International Harvester. Chassis L-190. Tractor in A-1 condition with Ensign carburetion. Two 73 gallon propane fuel tanks. Twin 5500 WG capacity U-69 Trinity Steel tanks. Reyco tandem. Extra good 12-ply tires, 10:00 x 20 with two extra spares and wheels. Complete $7,250.00. Call NOR-TEX PRODUCTS CO., Collect, C-5416, Denton, Texas.

DELIVERY UNITS: SINGLE OR Twin Barrel. Our prices are competitive. We invite comparison between the equipmen and price on our units with any competitive units. We believe we can give you the highest payloads per pound of gross vehicle weight. Write, wire, or phone, Lubbock Machine & Supply Co., Inc. Drawer 1589, Lubbock, Texas.

FOR SALE — TANKS - CYLINDERS

FOR SALE: 15,000 GALLON USED BUtane storage tank, ASME tank. Write P. O. Box 222, Jeffersonville, Indiana.

FOR SALE: SEVERAL 3000 GALLON tanks. One 6000 gal. tank. All on heavy duty oil field skids. This equipment used less than one year. Contact H. P. McCullough, 707 North "D" St., Midland, Texas.

OVER 2000 TRACTOR AND MOTOR FUEL TANKS CURRENTLY IN STOCK

Write for WEEKLY stock lists.

WESTERN TANK & STEEL CORP.
Box 1013
Lubbock, Texas

SKID TANKS
— IN STOCK NOW —
3000 gallon size built especially rugged for oil field use. Write, wire or phone
Lubbock Machine & Supply Co., Inc.
P. O. Drawer 1589
Lubbock, Texas

ABOVE GROUND PROPANE SYSTEMS

We manufacture a complete line of above ground propane tanks, approved for all states, in sizes ranging from 115 W.G. to 1,000 W.G. Free delivery within our trade territory, and financing of all types available.

WRITE FOR PRICES.

WHITE RIVER DISTRIBUTORS, INC.
Batesville, Arkansas
Phone 570

FOR SALE - TANKS - CYLINDERS - Cont.

FOR SALE: ICC 26-150 (RESTAMPED TO ICC 26-300) 88-lb. propane capacity cylinders 13" ID x 45". Average weight 123#. Complete with 3104CO wrench type valves and caps. Good condition. Attractively priced at $4.50 F.O.B. Midwest points. Write for details and complete specifications. Address: CYLINDERS, P. O. Box 436, Kansas City 41, Missouri.

STORAGE TANKS
Available Immediately
In the following capacities: 1000, 2000, 3000, 5000, 6000, 8000, 10,000, 15,000, 18,000 and 20,000. Your choice of 46" to 96" diameter. Write, wire or call Lubbock Machine & Supply Co., Inc., P. O. Drawer 1589, Lubbock, Texas.

FOR SALE — MISCELLANEOUS

DECALS MADE FOR TRUCKS, EQUIPment. Small or large quantities. Catalog free. Mathews Co., 827 S. Harvey, Oak Park, Ill.

FOR SALE — IMMEDIATE DELIVERY! Eureka Smokehouse Burner Assemblies! For meat smoke houses using bottled gas. Completely automatic. Clean filtered smoke. Distributes heat uniformly. Low gas consumption. Automatic temperature and pilot control. Less product shrinkage. Easily installed. Write for descriptive pamphlet. Eureka Equipment Company, P.O. Box 396, Beloit, Wisconsin.

SERVEL GAS REFRIGERATORS

S600A, with CROSS-TOP FREEZER (6 cu. ft.) @ $42.00
BN600A 6 cu. ft. @ $42.00
S400A 4 cu. ft. @ $30.00

Used: guaranteed in good operating condition. Modern, attractive, excellent condition. Minimum shipment 12. Low delivery cost anywhere. Send for illustrated folder.

BEACH REFRIGERATOR CO.
196-11 Northern Blvd., Flushing 58, N. Y.
Phone Flushing 7-6161

— SELL PROPANE —
FOR
FLAME-CUTTING STEEL!

The Rigger "H" cutting torch was especially designed for flame cutting with LP gases. It is an excellent scrap cutting torch. List price $32.40. Tips list at $3.00 each.

SPECIAL INTRODUCTORY OFFER!!
If ordered from this ad, you can buy these torches for a limited time only for:
$13.50 EACH IN LOTS OF 6 OR MORE!

Propane tips to fit these torches cost you just $1.25 each when ordered with the torches. Single sample torch $20.25, net. Proxy propane cutting tips are available to fit any torch your customer may be using. Your discount is 40%. They cut as fast as Acetylene and will help you build up your year 'round load.

ORDER TODAY DIRECT FROM

FLAME CUTTING EQUIPMENT CO.
P. O. Box 455 Dania, Fla.

FOR SALE — MISC. - Cont.

SERVEL GAS REFRIGERATORS
CLEAN — ALL CHECKED OK
Model M500A.....$15.00 each
Model N500A.....$18.00 each
In lots of 50 or more.
FRED A. BROWN COMPANY
100 E. Allegheny Avenue
Philadelphia 34, Penna.
Est. 1918 REgent 9-1130

WANTED — MISCELLANEOUS

WANTED: USED 100# CYLINDERS AND Hackney 60# cylinders. Furnish photos and all data. Reply Box 1225, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

WANTED: PROPANE TRANSPORT 200# W.P., U-69 single axle, 3,000 to 4,000 gallons. Please state best cash price and condition. Winona Gas Service, Winona, Kansas.

PROFESSIONAL SERVICES

INDIVIDUALLY DESIGNED
Ammonia and LP Gas Plants

H. Emerson Thomas
& Assoc., Inc.
Westfield, N. J.

L. P. GAS INSURANCE

Have your agent write us about our Complete and Comprehensive Coverage for Adequate Limits of Liability at Reasonable and Normal Rates with Specialized Safety Engineering and Claim Service. Available only in Alabama, Arkansas, Arizona, Georgia, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.

PAN AMERICAN FIRE & CASUALTY COMPANY
Earl W. Gammage, President
P.O. Box 1662 Houston, Texas

SELL MORE with Display Classified Ads

This is an example of the attention getting type faces available in display ads in the BPN Classified Section. Cost is only $12.00 a column inch per issue, an ad this size (3") is $36.00. The large lines above are set in 18 pt. Other available sizes are shown below.

14 POINT DISPLAY
12 POINT DISPLAY
10 POINT DISPLAY

Body type is set in 7 pt like this sample. An average of 7 words to the line.

CLASSIFIED Advertising

BPN

PROFESSIONAL SERVICES - Cont.

LP GAS INSTALLATIONS and
ANHYDROUS AMMONIA PLANTS
DESIGNED AND INSTALLED
"There's No Substitute For Experience"
PEACOCK CORPORATION
Paul E. Peacock, Jr., Pres.
Box 268, Westfield, N. J.

COMPLETE
LP GAS SERVICE

TO SELLERS — Sales Reports, Accounting Reports, and Engineering Services to sell your business with no cost to you.
TO BUYERS — We are able to give you ALL the facts regarding the LP Gas businesses we have for sale. Write us or call collect.

FEDERATED PETROLEUM SERVICES, INC.

Sales Office: 218 West Mifflin St. Madison, Wisc.
Accounting Office: 300a Broadway Hannibal, Mo.

PROFESSIONAL SERVICES - Cont.

L. P. GAS INSURANCE
SPECIALIZED
INSURANCE SERVICE
TO COMPLETELY
PROTECT YOU
Write or Phone
J. J. McCARTHY
INSURANCE
AGENCY
422 Connell Building
Scranton 3, Pa.
Phone Diamond 3-1251

MISCELLANEOUS SERVICES

BUSINESS RECORD FORMS. ALL-WEATHER EZE-SNAP delivery invoices, for use when making LP gas metered truck deliveries. 1000 sets (3 part) imprinted with name, address and telephone. $17.50 per 1000 sets. DEGREE DAY SYSTEMS, WOODSIDE 77, L. I,. N. Y.

CLIENTS OFTEN INCREASE PROFITS 2% or more by using my cost reducing bulk and bottle operating procedures and sales procedures. Property evaluations and special assignments also handled. Floyd F. Campbell, Management Counselor, 821 Crofton Ave., Webster Grove 19, Mo.

KRAFTBILT BUSINESS RECORDS INcrease your profits—improve your credit—help boost sales. That's why KRAFTBILT LP-Gas Forms are used by more LP-Gas dealers than any others. Simplify your office work—use KRAFTBILT simplified forms. Approved by your Assso-ciation. Highly recommended by outstanding LP-Gas suppliers. Don't wait! Send postcard now for LP-Gas Form Catalog. ROSS-MARTIN CO., P.O. Box 800-S, TULSA 1, OKLA.

Perfectly Bloomed Roses Are Credited to LPG

A NEW use for gas is reported at Richmond, Ind., where water—heated by gas—is helping to keep roses fresh and firm while in transit from grower to distributor.

While this installation of an automatic storage gas water heater utilizes natural gas, it would seem logical that L. P. gas could be similarly employed by greenhouses that are off city gas lines.

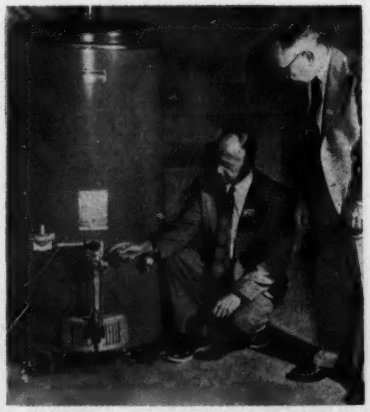
Hill Floral Products Inc. of Richmond, Ind., uses up to 150 gal. per hr of 115° F water to assure roses being in perfect bloom when unpacked by wholesale distributors.

This hot water treatment of cut roses has been going on at Hill since the fall of 1953 when a Ruud gas water heater was installed to supply such "insurance".

The Hill organization, which was founded in 1881 and today is one of the nation's oldest and largest greenhouse concerns, grows and ships 12,000,000 roses each year.

Normally roses are placed in cold water immediately after the stem is cut from the bush in the greenhouse. However, there are times when immediate stem submersion is not possible. These roses are therefore in need of special attention to compensate for the minutes or hours they have been off the bush.

The special treatment they receive is an immersion of the stems in 115° F hot water. University and floriculture industry research has proved that cold water, like cold molasses, does not flow readily up the stems. "Hot" water is absorbed easier, faster and in larger quantities.



E. E. Ihlstrom, sales manager of Richmond Gas Corp., shows George B. Canan, manager of Hill Floral Products Inc., some of the automatic control features in the gas water heater that provides the Richmond, Ind. rose grower with up to 150 gal. per hr of 115° water. This heated water is used to condition roses for shipment to distributors.

So, the Hill organization places cut roses in 10 qt buckets that are half-filled with the heated water. About one-third of the stem is immersed in the water that was heated by a Ruud Sanimaster gas water heater.

The Sanimaster is designed and constructed to store water at high temperature and to provide two outlet temperatures: one at 180° F and the other a mixed temperature of any selection.

Buckets of roses are then placed for 12 hours in a refrigerator kept at 38-40° F. By the time the water temperature drops 75° the roses have absorbed enough of the warm water to fill all the cells in the stems. The blooms, conditioned for transit, are removed and packed in boxes with cracked ice covering the stems. The flowers go forward to distributors by air freight, railway express or refrigerated truck.

"The roses arrive fresh and firm," states the greenhouse manager. "The benefits of this hot water immersion are that we are sure the roses have absorbed sufficient water to stand shipment, and the water has been absorbed much faster."

Power Section

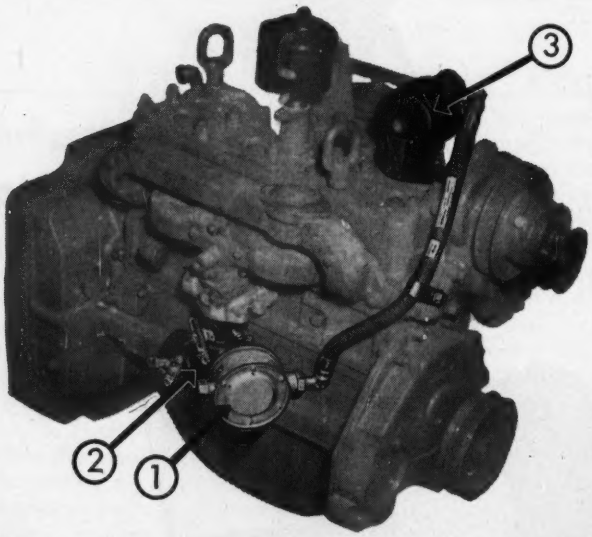
CARBURETION • INSTALLATION • SERVICING

Leaders in thought are generally leaders in action. They are the natural pioneers of new ideas. Casey Abbott, father of the acreage crop control plan, was also a pioneer user of LPG as tractor fuel, and his example has helped to put propane power on many other farms in the irrigated valleys of the West.

Read about it on the next page . . .

ZENITH offers special new features

that simplify installation and step up performance in LP-gas systems



1 INTEGRAL FINAL STAGE REGULATOR—Installation of LP equipment is greatly simplified with this feature—a real time saver. Extra parts and connections are eliminated, resulting in further savings of installation costs.

2 BUILT-IN IDLE SYSTEM—Main fuel metering is controlled by a fixed jet orifice, or it may be adjustable. The main fuel system on many models is supplemented by an economizer system which operates only on full throttle or load demand.

3 SPECIALLY HOUSED VAPORIZER—With the regular engine thermostat installed in the vaporizer casting, temperature in the vaporizer is controlled within narrow limits. A cold chamber in the vaporizer recondenses the vapor in the system when the engine is returned quickly to idle or is shut off, thus avoiding sudden pressure rise in the regulator which could cause fuel loss.

Zenith, foremost producer of carburetors and fuel filters, brings to the LP Gas industry 50 years of "know-how" in carburetor research, engineering and manufacturing. This experience includes an intimate working knowledge of the problems of carburetion in a wide range of industrial, agricultural and commercial engines. Out of this collective experience Zenith has designed and perfected features that set new standards of performance and operating economy in LP Gas Systems.

For example, the Zenith Idle System is built into the carburetor, not around it. Thus, accurate control is provided and smooth transfer to part throttle operation is assured.

On most industrial and agricultural applications, the Zenith Final Stage Regulator is attached directly to the carburetor providing very short travel for the gas from the regulator to the carburetor, assuring constant control of vapor temperature and density.

And, too, Zenith Vaporizing Equipment is usually housed in a special casting which replaces the water outlet casting on the engine—a feature that effects substantial savings in installation costs.

These and many other outstanding design features have already made Zenith the choice of cost-conscious LP Gas users everywhere.

Zenith—LP Gas Fuel Systems now include factory-engineered applications for many models of Chevrolet taxicabs and trucks—Plymouth taxicabs--Dodge trucks—Briggs and Stratton Engines—Lift Trucks—Continental and Wisconsin Industrial Engines—G.M.C. trucks—International Harvester trucks and other additional units now under development.

Complete information and prices can be obtained from your nearest authorized Zenith Distributor, or write the factory direct.

ZENITH CARBURETOR DIVISION OF
696 Hart Avenue, Detroit 14, Michigan

Export Sales and Service: Bendix International Division, 205 East 42nd St., New York 17, N. Y.

Father of Crop Control Law Farms With L. P. Gas

Casey Abbott's practical good sense first became widely known when he publicly advocated crop controls in 1931. It was confirmed when he became a pioneer in converting his farm machinery to LPG. His tractors have been operating on butane since 1937; today, practically everything on the ranch is LPG-fueled.

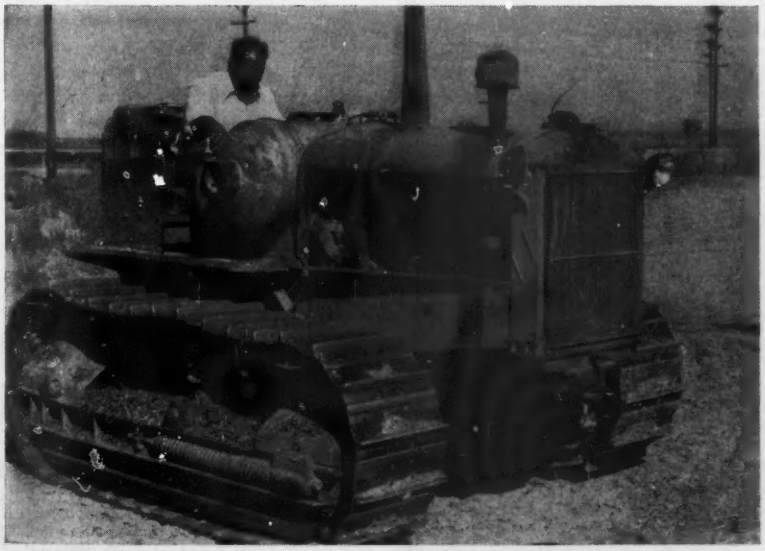
H. S. Casey Abbott, the man whose acreage control plan was enacted into law.

By Carl Abell
Editor

H. S. CASEY ABBOTT, who farms 1100 acres of irrigated land in the Salt River Valley near Avondale, Ariz., and also feeds an average of 1000 cows, has two claims to fame. He is the father of the allocation plan now used by the Department of Agriculture in attempting to control overproduction of basic crops, and he was the first farmer in that part of Arizona to use butane as tractor fuel.

Mr. Abbott still has one dog-eared and much-read copy of the booklet in which he first advocated acreage control, and which he had printed at his own expense in 1931 for distribution to members of Congress. Most of the features which he advocated in that booklet have been incorporated into the agricultural control law.

His first experience with butane as engine fuel came in 1937. Spencer Nitchie, president of the Butane Corp., Phoenix, persuaded him to convert a Model WK Allis Chalmers tractor which was in year-round service as the workhorse of the farm, and was in almost continuous service on the feedlots or doing heavier jobs out on the crop acres. This tractor is still in use on the ranch. Its maintenance requirements have been surprisingly moderate—it has only needed two replacement kits for the engine, consisting of pistons, sleeves and rings, and only two valve grinds.



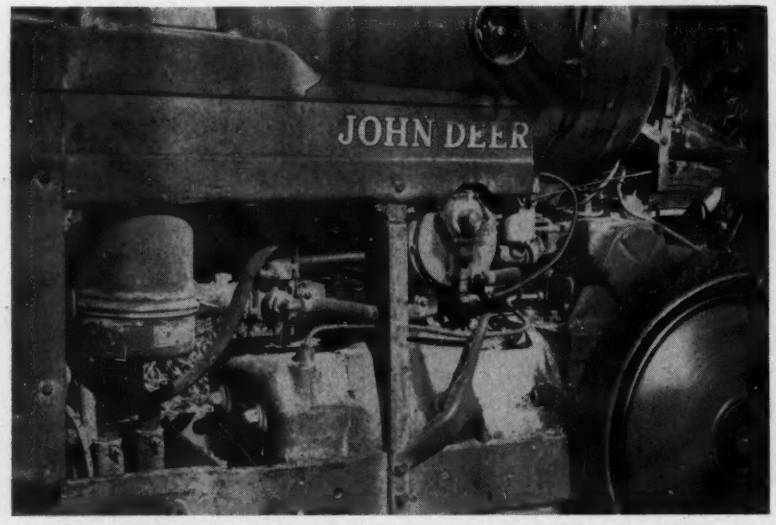
Casey Abbott's veteran Allis-Chalmers WK starts at the first turn for Ken Boley, Butane Corp.'s service engineer.

For 18 years of continuous service that comes close to being a record. In the meantime the saving in cost of fuel has been quite appreciable. Long before the maintenance saving became apparent, Mr. Abbott was so thoroughly sold on butane tractor fuel that he had Mr. Nitchie convert the five John Deere tractors which were used in planting, cultivating and harvesting cotton, grain and stock feed crops to which the 1100 irrigated acres were devoted. These tractors were in good mechanical condition before they were converted—a prerequisite the Butane Corp. has always insisted upon. They were used on the ranch for five years following conversion, and the records show that the engines required no mechanical work whatever. At the end of this five-year period they were traded in on new tractors which were more adaptable to specialized uses.

The new tractors all came from the agencies equipped to burn gasoline. There was still a gasoline pump available on the ranch, and due to the urgent need for the tractors in the fields, and to wartime shortages and other reasons, the tractors were not

The John Deere G takes off for a discing job.

Red Fox forage chopper gets a heavy workout on a weed grown field.



The converted tractor operates in one gear higher than it originally did on gasoline.

immediately converted to LPG operation.

Mr. Abbott realized that his fuel bills were high, but in the press of other matters he did not do anything about it. This went on for about a year; then one day he walked out in the machinery yard when he was not supposed to be on the place, and found one of his employes filling his own car tank at the company gasoline pump. That free ride ended in a hurry, and the tractors were equipped with LPG fuel systems as quickly as possible.

It is not known how much of Mr. Abbott's gasoline had been going into employes' cars, but checking back through the records he is able to state positively that putting this tractor fleet on butane cut his monthly fuel bill in half.

In addition to the veteran Allis-Chalmers WK crawler, the Abbott ranch fleet consists of two DC Case tractors, two Farmall M's, one SC Case, one John Deere G, one Red Fox forage chopper, and one trailer-mounted Hercules engine that drives a tailwater pump. This last unit picks up the surplus water that accumulates at the lower end of the irrigation furrows and returns it to the distributing ditches so it may have a chance to soak into the field instead of being wasted as overflow. All of these units are now operating on L. P. gas.

Other LPG uses on the farm include a trailer-mounted Manchester weed burning outfit with a single hand burner, which is used to keep the irrigation canals and ditches clear of weeds, and for weed control in other marginal areas. The cattle department also has a small butane furnace that is used for heating branding irons and other utility jobs around the lots.

Mr. Abbott gives as his primary reason for using L. P. gas in his tractors the great reduction in fuel cost, which is an item of considerable importance in operating nine engines through the long crop season of Central Arizona. The saving in maintenance cost, greater freedom from service interruptions, and elimination of pilferage are also items that should be considered by every farmer. For these reasons he will tell anyone who asks that L. P. gas is the only fuel that a farmer can afford to use in his power equipment.

REO LPG SAVES 25%

Robert Sipes (left), broker for Producers Transport, Inc., Burnettsville, Indiana, reports—"I installed one of your six cylinder 160 h.p. LPG engines in one of my other trucks. I am pulling LP Gas loads in twin 37' tandem trailers averaging around 60,000 G.C.W. I have put 20,000 miles on one set of spark plugs, have made only two oil changes and am getting 5½ miles per gallon on LPG. This constitutes a saving of approximately 25% on operating costs." This replacement engine's performance led to the purchase of a new Reo V-8 tractor by Mr. Sipes.

100,000 MILE WARRANTY on all Reo Gold Comet Engines! That's your assurance that—pound for pound—Reo offers you the greatest staying power, the greatest earning power for medium or heavy-duty hauling. Both the Gold Comet Sixes (107 to 160 H.P.) and the Gold Comet V-8's (195 or 220 H.P.)—gas or LPG—are available in rugged Reo chassis, or as replacements in your present trucks. Call your Reo Factory Branch or Distributor for the facts today.

REO MOTORS INC.

LANSING 20, MICHIGAN • TORONTO, CANADA

SUBSIDIARY OF **BOHN** ALUMINUM AND BRASS CORPORATION

REO

WORLD'S TOUGHEST TRUCK

TRUCKS, BUSES AND GOLD COMET ENGINES FOR ORIGINAL EQUIPMENT, INDUSTRIAL AND REPLACEMENT—GAS OR LPG.

Lone Star Practices What It Preaches With Large-Scale Conversion Of Service Trucks

Grover Bates, Lone Star mechanic, inspects fittings on special fuel tank designed for the company's pick-ups. Truck can be fueled from the ground, and without interference from load.

LONE Star Gas Co., which headquarters in Dallas and supplies natural gas service throughout a large part of Texas, is engaged in an extensive program of converting the vehicles of its distribution and transmission departments to operate on L. P. gas. Fifteen service trucks in the Waco distribution district were operating on the company's Stargas at the end of August.

The plan to operate the trucks on L. P. gas fuel, using a combination carburetor which will allow the same truck to operate on gasoline with the mere flip of a switch on the dashboard, stems from a number of reasons, according to Stargas department Manager Feild Foster.

"Lone Star is producing large quantities of L. P. gas, which is better engine fuel than the finest gasoline we can buy," he said. "Furthermore, we can supply this fuel at much lower price than gasoline.

"A gallon of butane will operate a truck nearly as many miles as a gallon of gasoline. Due to the fact that L. P. gas or butane leaves no carbon or gum in the engine and does not dilute the oil in the crankcase, engine repair is greatly reduced, and oil changes are required at less frequent intervals."

At Waco the company has installed a 6500-gal. tank as a service station in the district warehouse yard. It is equipped with L. P. gas meter so drivers can fill their truck tanks without an attendant since calculations have been eliminated.

The service station has a pumping unit which fills the fuel tanks at a rate of 30 gal. per minute.

Fuel tanks, designed by the Star-

Storage tank and dispensing equipment for company vehicles in Lone Star's Waco district warehouse yard. A guard rail has been added since the photograph was taken.

The year's biggest truck news is right here on this page!

New INTERNATIONALS!

All-Truck Built to save you the BIG money!

It's here! A great new line of light, medium and heavy-duty INTERNATIONALS from 4,200 to 33,000 lbs. GVW. They're *all truck,* with no passenger car components asked to do a truck job . . . with more features than ever for BIG money savings, in operating and maintenance costs.

These new INTERNATIONALS are powered by a range of 10 gasoline and LPG engines designed specifically for trucks. They give you high power and torque in the normal driving range where you can *use* it — in traffic, heavy going, up hills. And they give you this top performance at wear-reducing, money-saving rpm.

They have smart, functional styling for easy, economical maintenance, even on the roughest truck jobs. They have driver-saving cabs that let drivers work longer without fatigue. First chance you get, see these good-looking, easy-working, BIG money saving INTERNATIONAL Trucks.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

INTERNATIONAL® TRUCKS

Drive in real comfort! Comfort-angled steering. Hood is low for closeup view ahead. There's "Quiet-ride" acoustic roof lining, draft-free door seals in both standard and optional deluxe cabs, plus a wide choice of solid and two-tone exterior colors. New deluxe cab has additional color-keyed interior, deluxe steering wheel, foam rubber seat, fiber glass insulation, deluxe chrome trim.

Motor Trucks • Crawler Tractors • Industrial Power
McCormick® Farm Equipment and Farmall® Tractors

gas department, are installed in the bed of the pickup back of the cab and hold about 28 gal., which is more than enough for a day's work. The tanks are built to fit any truck and reversible so controls, which are located at one end, can be faced on either side to avoid conflicting with tire carriers, fire extinguishers or tool boxes. Gauge, filling connection, etc., are installed to protrude through an opening cut in the side panel of the truck bed, making them accessible from the ground without interfering with appliances or other loads the truck may be carrying.

Installations are being made by Grover Bates, mechanic for Waco district. John Bartley and Deck Hulcy Jr. supervised the first two installations and trained Mr. Bates for the conversion work.

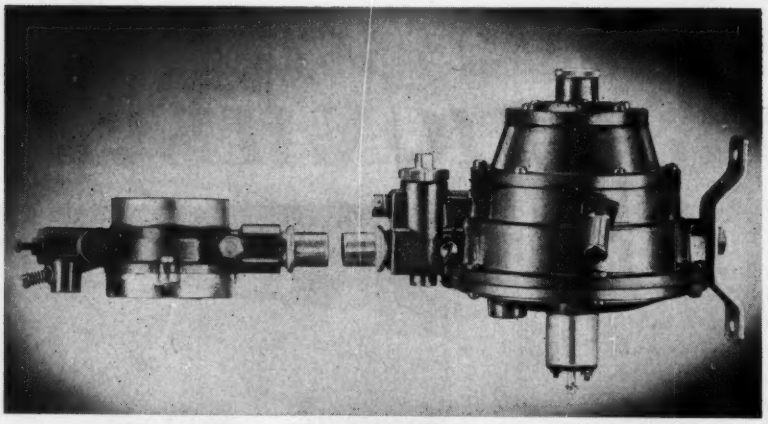
"Waco district will continue the conversion of additional trucks until all equipment that is practical to convert is operating on our own L. P. gas fuel," Mr. Foster said.

Preparations are also being made to convert 53 pieces of equipment in the Ranger area of the transmission division, including trucks, cars and welding machines. L. P. gas service stations will be installed at Ranger and Gordon to take care of this equipment.

Such stations will be a common sight along the highways, too, in the near future, according to Stargas engineers. Already such facilities are being added to existing gasoline filling stations in many areas, catering to truckers. Five stations between Dallas and Waco, according to Deck Hulcy Jr., have a tank for L. P. gas motor fuel.

The increased use will afford an expanding market for L. P. gas production which has been greater than demand, particularly during summer months.

Lone Star's farm tractor conversion program, begun in the spring, has made important strides toward greater utilization of this fuel. Through August, more than 250 tractors had been converted throughout Lone Star areas and the figure was expected to jump sharply following the farming season when tractor owners can release their equipment to allow time for mechanical changes to be made. ■



DIX...LPG Carburetor

Simplest of them all in

...Design

...Installation

With DIX . . . You Save on Service

DIX CARBURETOR COMPANY

6605 S. WILSON AVE. • LOS ANGELES 1, CALIF.

POWER NEWS

Largest Dump Truck To Haul Iron Ore

Snyder Mining Co., one of the pioneer LPG-powered truck operators in the Mesabi Iron Range, in Minnesota, has recently taken delivery of a new Oshkosh truck which was believed at the time of delivery to be the largest two-axle all-wheel drive dump truck ever made.

The all-steel body was designed with a water-level capacity of 15 cu yd, and estimated payload of 50 tons. Gross vehicle weight rating was 95,000 lb. The power plant was a Hall-Scott Model 1091-B-1 (butane burning) engine with 356 hp at 2200 rpm.

Snyder Mining Co. operates three of these enormous trucks, and has been using LPG as truck fuel for the past 10 years.

(We have just learned that more recently Oshkosh Motor Truck Inc. has built and delivered an even larger truck, with 17 cu yd body, which will haul ore at the Jones & Laughlin Columbia mine, Virginia, Minn. This was equipped with the same model LPG-burning Hall-Scott engine.)

Parkdale Co. Plans Name Change to Include Beam

The Parkdale Co., Los Angeles, manufacturers of Beam L. P. gas carburetion equipment, will become Beam Products Manufacturing Co., effective Jan. 1, 1956.

No personnel or ownership changes are involved. Increasing national acceptance of Beam products have been entirely responsible for the decision to change the company name as a means of identification.

The Beam trademark has become widely known since it was introduced in 1936. Manufacturing volume has outgrown two plants since 1949 and the company moved into its spacious new plant just a year ago.

Much of the credit for the support of LPG carburetion by smaller industrial engine manufacturers and users is due to a Beam installation on a fleet of fork lift trucks in early 1949. The company's grasp of the potential in the industrial truck field led to the development of the now famous Beam 120, which combines the features of easy starting, large capacity and positive lock-off. The company produces regulators with a

Already boasting its new name is this year-old plant where Beam LPG carburetion equipment is produced in Los Angeles. The name change from Parkdale Co. to Beam Products Manufacturing Co. will become effective on Jan. 1.

capacity of up to 500 hp as well as adapters, solenoid valves, straight carburetors and spud-ins.

Airline Tug and Energizer Fleet to Convert to LPG

Delta Airline officials report they are converting the engines of their Atlanta (Ga.) airport fleet of tugs and energizers to LPG in a program that will save nearly $320 a year on each of the unit's operating costs.

Spokesmen for the airline said the conversion costs will be amortized in less than six months of operation.

Delta's decision to convert its non-highway, non-load bearing equipment at Atlanta was based on an operating experiment conducted by its maintenance department and General Gas Corp., Baton Rouge. Delta spokesmen said the five-month test proved that L. P. gas usage results in reduced fuel consumption, longer life for both engines and crankcase oil and less maintenance work as well as major savings in fuel costs. They pointed out that average cost for L. P. gas in their ground equipment resulted in a savings of more than 9 cents per gal.

L. P. gas caused no fouling of sparkplugs such as is normal in conventionally powered engines. At the same time, Delta's ground equipment benefited from LPG's higher rating of 100 octane.

Delta maintenance officials said the cost of converting each unit of its Atlanta tug and energizer fleet averaged $150. H. A. Petty, assistant to Delta's maintenance superintendent, estimated annual savings of $319.98 per unit, including $286.08 in reduced fuel costs, $5.28 in lubricating oil, and $28.62 per year as a result of longer engine life.

Lockheed to Standardize on LPG for Motor Truck Fleet

Plans to standardize on liquefied petroleum gas as fuel for its International motor truck fleet and all other transportation units of Lockheed Aircraft Corp.'s California division have been initiated.

Fuel systems of fleet's gasoline-powered International R-195 and R-185 Roadliners will be converted for LPG operation. Future new highway tractor-truck purchases will be Internationals with factory-installed

LOAD BUILDER for L-P GAS MEN

BEAM L-P GAS CARBURETION

AUTHORIZED SALES

BEAM 100
120 H.P. Dry-Gas Regulator. Similar to 120 except for vapor use. Built-in vacuum lock-off.
3¾ lbs. in weight
6" in diameter.

BEAM 120
120 H.P. vaporizer-regulator. Used on fork lifts, tractors, taxis, small engines. Built-in vacuum lock-off.
3¾ lbs. in weight
6" in diameter.

BEAM 400
275 H.P. vaporizer-regulator. Automobile, truck, stationary engines. Use with solenoid valve for positive lock-off.
5¼ lbs. in weight
6½" in diameter.

BEAM 800
500 H.P. vaporizer-regulator. Large trucks, off-the-road equipment, large stationary engines. Built-in vacuum lock-off.
15 lbs. in weight
9" in diameter.

CARBURETOR ADAPTERS
Available in over 24 different models to fit all makes and types of engines.

SOLENOID VALVES
6 and 12 volt d.c. ⅛" and ¼" pipe size. Nine model LPG valves. One model gasoline valve . . . Special valves on request.

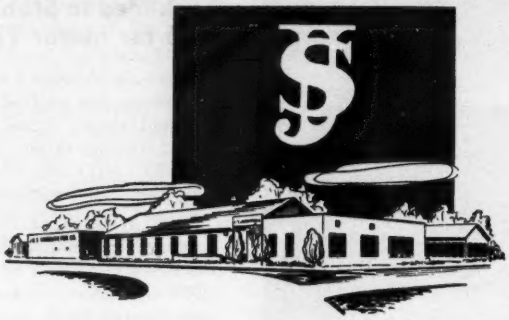
STRAIGHT CARBURETORS
Straight LPG Carburetors in many styles and sizes to fit most every requirement.

SPUD-IN ADAPTERS
Simplified spud designs for more economical conversions.

A BEAM DEALERSHIP IS A HIGHLY PROFITABLE OPERATION
Write or phone for information on how you may qualify.
CHapman 5-5791

BEAM PRODUCTS ARE NATIONALLY ADVERTISED
Beam Products are compact and easy to install. Only two simple independent adjustments. Quick sure starting. Can be converted so that engine will operate on gasoline again with the flick of a switch.

THE PARKDALE COMPANY
Best Buy
BUTANE-PROPANE CARBURETION
3040 ROSSLYN ST. · LOS ANGELES 65, CALIF.
REGULATORS · CARBURETORS · SOLENOID VALVES



IN TEXAS

AND THE GREAT SOUTHWEST

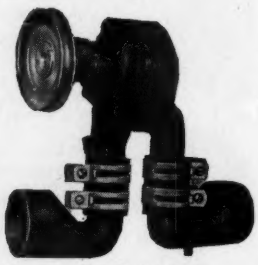
J & S is HEADQUARTERS FOR L.P. GAS CARBURETION.

We are adding buildings, buying machinery, hiring new people in order to keep up with greatly increased sales of **J&S** conversion equipment. We suggest you place your Fall stock order now, and have kits on hand for the big rush.

J & S CARBURETOR CO.

P. O. BOX 10391 • 2634 N. BECKLEY • DALLAS, TEXAS

4 CYLINDER MANIFOLDS



WATER PUMPS

JOHNSON'S

High Compression

Pistons • Manifolds • Pumps

Butane Manifolds for John Deere Models "G," "A," "B," "D"
Butane Manifolds for International "H," "Super H" and 300, "M," "Super M" and 400, "W9"
Butane Manifolds for Allis Chalmers "W," "WC," "WA," "WF," "UC," and "MC," Int. Truck "Red," "Blue and Black," and "Silver," Chev. GM 2-ton Truck
Water Pumps for John Deere Models "G," "A" and "B"

ALUM. DOME-HEAD PISTONS

BUTANE MANIFOLDS

Johnson Machine Shop

914 E. Howard St., Pontiac, Illinois

WRITE TODAY

For Price Lists and Dealer Discounts

LPG fuel systems. Conversion fork lifts (see December 1954, BUTANE-PROPANE *News*, p. 163), towing tractors, and die handlers from gasoline to LPG has been completed.

Service Station Delivers Up to 10,000 Gal. Per Week

The first service station to offer 24-hour L. P. gas service for truckers on the main route between Dallas and Houston is averaging better than 2000 gal. per week, with peaks running as high as 10,000 gal. per week during the height of the wheat, tomato, and watermelon seasons.

W. N. Cannon, operator of Cannon's Texaco Service Station, at intersection of U. S. Highways 75 and 84, in Fairfield, Texas, services truck operated by Trinity Steel Co. of Dallas with L. P. gas.

The station is operated by W. N. Cannon as part of a Texaco superservice unit in the heart of Fairfield, Texas. The butane storage and dispensing unit are owned by Butane Service Co., Fairfield, and the fuel is supplied by this company. Mr. Cannon buys the fuel and supplies the service to the customers.

Algas Equipment to Be Distributed from Dallas

Mobile Sales Inc., Dallas, has been appointed southwestern distributor for Algas L. P. gas carburetion equipment. A complete stock of all types of Algas conversion kits, parts and accessories including motor fuel and tractor tanks, for conversion, is being stocked in Dallas for immediate shipment to all parts of the Southwest.

U. L. Approval For Beam Model 100 Regulator

Underwriter's Laboratories approval has been granted for the Beam 100 regulator. This is a single unit regulator and carburetor system designed for vapor withdrawal

operation on small engines where sufficient fuel storage is available for continuous vaporization.

Features of the Beam 100 are the combination of the primary and secondary regulators in a single housing, and the incorporation of the power and idle screw adjustments for a spud-in to the gasoline carburetor within the regulator housing. The secondary regulator offers positive shut-off when the engine stops.

IHC Opens Truck Sales Office in San Francisco

International Harvester has opened a regional motor truck sales office in San Francisco, out of which it will administer the company's motor truck business throughout 11 western states and the territories of Alaska and Hawaii.

The new sales facility is located at 610 Brannan St. in San Francisco.

L. A. Hanson, Harvester's western regional motor truck sales manager, will be in charge of the new office.

LPG Is No Cure for Overworked Engines

Operators of gasoline engines which are working beyond their capacity and developing mechanical trouble therefrom will sometimes try to cure their troubles by converting the engines to propane. When the trouble induced by overloading continues, the operators are inclined to blame the propane or the mechanic who made the conversion instead of themselves. The cure for too little power is more engine, not an L. P. gas conversion.

Engine manufacturers very wisely give the continuous load rating of their industrial models at a figure approximately 60% of the maximum horsepower which the engine is capable of developing. They have learned by experience that an engine working within this limit will last satisfactorily and will give good fuel economy, whereas prolonged operation at higher load shortens the life of the engine a great deal and makes the fuel consumption unsatisfactorily high.

These troubles do not develop in the engine when operated at higher than the continuous load rating for short periods only as in truck and tractor operation. Engines operated at steady power output such as an irrigation service should never be allowed to pull loads which draw the manifold vacuum lower than 7 in. A lower vacuum reading under continuous load is a definite indication that a larger engine should be used.

ANOTHER WESTERN TANK first

LOOK to WESTERN for New Developments to surpass these Outstanding Firsts in the industry

√ **FIRST** in the Industry to produce tanks in tractor colors.

√ **FIRST** in the Industry to furnish the International Harvester Company with tanks to be installed at the Farmall factory on the 300 and 400 series tractors.

√ **FIRST** in the Industry to manufacture ADJUSTO, the pickup tank that fits all models of pickups.

AVAILABLE NOW! **A tractor tank of factory-design for the International "300" Utility Tractor. This tank, available only from Western, is now in production.**

Arkansas Foundry Co. LITTLE ROCK, ARK.
The Binkley Company OKLAHOMA CITY, OKLA.
Brungart & Jennings BIRMINGHAM, ALA.
Gene Bumous, Inc. PLAINVIEW, TEXAS
Chickasha Gin & Mill CHICKASHA, OKLA.
Thermo-King Sales DENVER, COLO.
Fannin's Gas & Equip. PHOENIX, ARIZ.
Illinois Auto Elect. CHICAGO, ILL.
Moulden Supply Co. JACKSON, MISS.
Sleeper Equip. Co. ST. LOUIS, MO.
Southwest Gas & Equip. LIBERAL, KANSAS
Tide LPG, Inc. EDINBURG, TEXAS
AND MANY OTHERS

There's a WESTERN DISTRIBUTOR selected for Dependability and Know-How . . . Near You!

Western TANK AND STEEL CORP.

POrter 5-9474 Box 1013 Lubbock, Texas

Power Products

To secure further information on these products, refer to coupon on page 44.

18. New Truck Line

A new line of International trucks that combines style-setting design with new, rugged power and durability is announced by the motor truck division of International Harvester.

Designated the S-line, the new models include a wide and complete range of four-and six-wheel gasoline and LPG-powered motor trucks ranging in gross vehicle weight rating from 4200 to 33,000 lb.

S-line models range from the light-duty S-100 series through the heavy-duty S-180 series. The line includes a wide range of pickup, panel, stake, and multi-stop delivery models with factory-mounted, added-capacity bodies; farm trucks, Roadliner truck-tractors, and other conventional chassis models for medium and heavy-duty hauling requirements in general or specialized fields; five cab-forward models; fire truck, school bus, and four- and six-wheel Loadstar dump-truck chassis; and three four-wheel-drive models including a new light-duty S-120 (4x4) rated at 7000 lb gvw.

International Harvester Co.

PERFORMANCE

AT ANY ALTITUDE!
AT ANY TEMPERATURE!

CENTURY LP-GAS CARBURETORS

Individually Designed because it's a METERING VALVE TYPE

UL

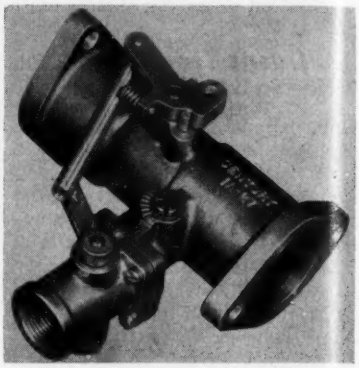
3C Controlled Combustion Carburetion

STARTS INSTANTLY upon installation.
GIVES INSTANT POWER—no choking or fluttering.
IDLES PERFECTLY.
BALANCES POWER of each cylinder.
NO MULTIPLE ADJUSTMENTS—tune up only.
PERFORMS AT ALL speeds to pre-set perfection.

CENTURY GAS EQUIPMENT CO.
11188 Long Beach Boulevard, Lynwood, California

Easy Starting! Perfect Idling! Economy!

19. Tractor Carburetor

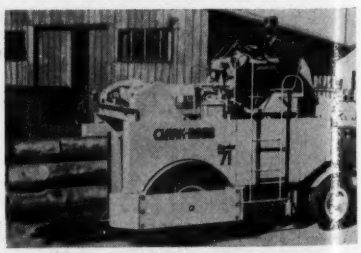


A new ball-bearing-equipped carburetor, designed especially for the John Deere tractors (models A, B, D and G) has been announced by Century Gas Equipment Co. Sealed ball bearings on Century's patented metering valve provide a more sensitive action in the governor, improve durability, and reduce maintenance cost, according to the manufacturer.

Other advantages claimed are ease of installation, precise calibration of the metering valve to the performance requirements of the engine, and a single adjustment which establishes proper relationship throughout the entire range. The carburetor metering is said to be unaffected by changes in temperature, altitude, atmospheric conditions, or variations in regulator outlet pressure.

Century Gas Equipment Co.

20. Straddle Carrier



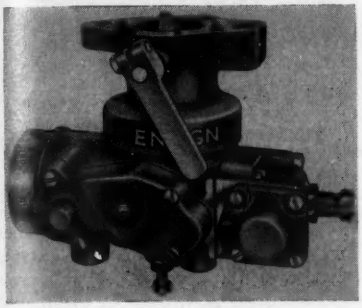
A new straddle carrier with a rated capacity of 10,000 lb has been announced by the Ross Carrier division of Clark Equipment Co. Designated as Series 71, this carrier may be obtained with either a Ford 130-hp engine or a Hercules 91-hp engine. An

L. P. gas fuel system may be included with either power plant. Road speed is given as 30 mph.

The hoisting mechanism is actuated by a double-acting hydraulic cylinder taking its power from the engine. The Series 71 is available in nine models capable of carrying loads ranging from 42 in. to 50 in. in height and from 40 in. to 52 in. in width.

Ross Carrier Div.,
Clark Equipment Co.

21. Industrial Carburetors



A late development in the art of industrial gas carburetion equipment is now on the market. It is Ensign Model Mgl, made in ¾ in. and 1 in. SAE sizes and is rated at 60 hp capacity. It will handle very efficiently, with maximum economy and power the engine requirements from 15 to 60 hp.

This Ensign carburetor, designed for dry gaseous fuels, particularly natural gas and propane, is also capable of handling lower Btu manufactured gas because of its interchangeable venturi features.

Outstanding design features include the Ensign easy starting device, plus the addition of a built-in economizer, which is effective at partial loads. The carburetor with integral economizer is specially appropriate for use with tractors and small farm machinery where variable speed unloads are encountered. Since the unit is primarily designed for industrial and agricultural services, it is ruggedly built of cast bronze and includes steel throttle bushings and dust seals, while the carburetor is primarily intended for use with magneto ignition. The unit may be used in either updraft or downdraft positions. Where a straight through carburetor is required and where vacuum spark control must be incorporated, the Ensign Model Xg carburetor is recommended.

For the smaller industrial and agricultural engines the Ensign Model Mgl, because it is small and compact in design, may easily be fitted into a

*LP GAS CARBURETOR NO. 11160
MANUFACTURED BY GARRETSON FOR
THERMO KING

The world's *toughest* carburetion job is truck refrigeration— requiring unattended, automatic starts under all climate and altitude conditions. The people at Thermo King, the world's largest producers of truck refrigeration equipment, manufacture outstanding units. To maintain their reputation, they demanded carburetion that could withstand adverse conditions, with absolutely NO failures! Only the GARRETSON line could meet their standards. They use the Model FB fuel controller because it is the *only* controller on the market today which **guarantees** automatic starts using a balance line and lock-off! That's just one of the many reasons why Thermo King chose GARRETSON to manufacture its LPG carburetion system.

Take your cue from Thermo King—sell a carburetion line which offers features not available in *any other leading line* of equipment. The same ingenuity and know-how which meets the Thermo King standards goes into all GARRETSON equipment. The *time* to install carburetion is NOW—The *line* to install is GARRETSON!

Distributorships still available in some areas. Write to—

Garretson EQUIPMENT COMPANY
Box 111, Mt. Pleasant, Iowa

IN TRACTOR CONVERSIONS, TOO...

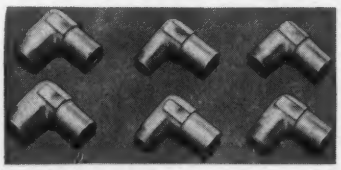
appearance is important

23 Gallons W.C. Tank for
1955 IHC "300 Utility" Tractor

YOU CAN COUNT ON a finished, tailored appearance with Santa Fe "Custom-Built" LP-Gas fuel tanks. Yet that's only one of their many important, sales-making features. Unrestricted visibility is assured by the low tank clearance. Refueling is faster, more convenient because the specially angled filler and vapor return valves are mounted forward. Increase your conversion sales with Santa Fe fuel tanks. Write for specifications and prices.

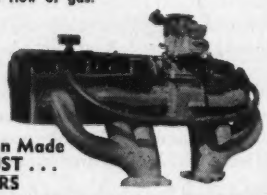
Santa Fe ENGINEERING & EQUIPMENT CO.

2830 Sand Springs Road • Phone Diamond 3-8169 • Tulsa 1, Oklahoma



Get Better LP-Gas Carburetor Installations with these HOSE CONNECTORS

No longer is it necessary to use many miscellaneous parts to make up ONE-ELBOW combination. With these Hose Connectors, ONE FITTING does the job. Manufactured of high grade ,heat-treated, aluminum-alloy. Anodized to resist corrosion, designed to fit hose perfectly, machined inside to give maximum unrestricted flow of gas.



Precision Made EXHAUST... HEADERS

Designed specifically for GMC engines 228 thru 302 and International engines 361 thru 501. Provides positive gasket sealing without port restrictions. Stock head pipes and flanges used. May be used with stock or dual intake manifolds. Provides longer exhaust-valve life, lower engine operating temperatures, and additional gas mileage through reduced back pressure. They are burnout proof and have ample capacity.

Write today for full information.

NICSON ENGINEERING CO
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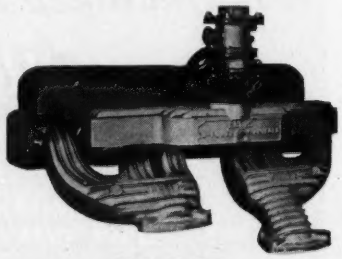
YOU GET MORE POWER..... MORE MILEAGE



With An **ELLIS**
BU-POWER MANIFOLD

The ELLIS BU-POWER MANIFOLD holds vital expansion of fuel until it reaches the combustion chamber. By keeping cool, the Ellis Bu-Power Manifold packs power into performance . . . increases mileage and gives you far more satisfaction with LPG.

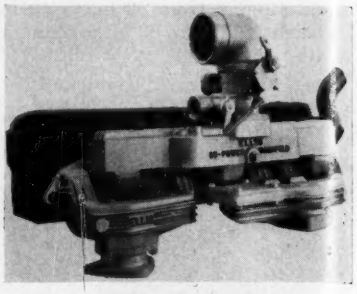
ELLIS MANIFOLD CO.
2212-A East Washington Blvd.
Los Angeles 21, California

In most cities, dial Information for the number of Ellis Manifold Distributor.

limited space requirement. The load and starting adjustments are located on the carburetor in a position easily reached.

Ensign Carburetor Co.

22. Dual-Exhaust Manifold



Increase in horsepower is the most outstanding advantage of the "Dual-exhaust," latest addition to the Ellis Manifold Corp.'s line of manifolds.

By lowering combustion chamber temperatures and reducing back pressure, Dualexhaust increases horsepower, according to the manufacturer, and when used with the Bu-Power manifold, it yields the equivalent of gasoline horsepower.

Bu-Power manifolds for the 372, 406 and 450 Internationals are engineered to use the four-bolt Holley throttle bases, which can be installed without removing the governor and throttle hookup.

Another Ellis product is the 501 International Bu-Power manifold, which takes the 2½-in. carburetor recommended for top horsepower by Ensign, Algas and Century. This is said by the manufacturer to be the only 2½-in. carburetor manifold that does not require adapters.

Ellis Manifold Co.

23. Tractor Fuel Data

Just off the press, a new two-color, 20-page booklet put out by John Deere, takes up the subject of L. P. gas as a tractor fuel and describes the John Deere line of factory engineered L. P. gas tractors. This new folder will be of special interest to L. P. gas dealers working with farmers who are considering the purchase of an L. P. gas tractor and will help them determine whether an L. P. gas model is best tractor investment.

The front portion of the folder is devoted to a discussion of L. P. gas.

The remainder of the folder is devoted to the John Deere line of factory engineered L. P. gas tractors. This line consists of three power sizes in seven models.

John Deere

BUTANE-PROPANE News

NBP

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